DOCUMENT RESUME

ED 248 069 RC 014 877

AUTHOR Forbes, Norma; And Others
TITLE Social and Cognitive Effects of the Introduction of Television on Rural Alaskan Native Children. Final Report.
INSTITUTION Alaska Univ., Fairbanks. Center for Cross-Cultural Studies.
SPONS AGENCY Alaska Council on Science and Technology, Juneau.
PUB DATE Mar 84
CONTRACT 33-82
NOTE 215p.; For summary, see RC 014 876.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC09 Plus Postage.
DESCRIPTORS *Alaska Natives; American Indian Education; *Cognitive Development; Commercial Television; Cross Sectional Studies; Cultural Awareness; Educational Television; Elementary Education; *Elementary School Students; Eskimos; Longitudinal Studies; Parent Attitudes; *Rural Areas; *Social Influences; Television Research; Television Viewing; Tribes
IDENTIFIERS *Alaska; Haida (Tribe); Impact; Impact Studies; *Television Access; Tlingit (Tribe)

ABSTRACT

A 5-year study of the social and cognitive effects of the introduction of commercial and educational television on rural Alaskan children utilized a variety of social and cognitive measures given to both longitudinal and cross-sectional samples of grade-school children: in 1977, when no participating village received television; in 1979, when half of the villages had television; and in 1982, when all villages had at least one year's experience with television. Findings showed television did not have simple or direct effects. Most television effects depended on other factors including age, sex, ethnicity, and previous exposure to the "lower 48" majority culture. Exposure to television strongly influenced children's sex-role stereotyping, perceptions of their own and the majority culture, and some cognitive abilities. Experience with television affected other media usage of both parents and children, impacting both knowledge of the world "outside" and beliefs concerning the reality of what was seen on television. The report includes a comprehensively documented glimpse of behavioral aspects of television use in Alaska. Favorite shows and changes in their popularity, viewing times, the parental role in program selection, and other patterns of television use are reviewed. Implications of these data for state policy are briefly discussed. (Author/NEC)

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Social and Cognitive Effects of the Introduction of Television on Rural Alaskan Native Children

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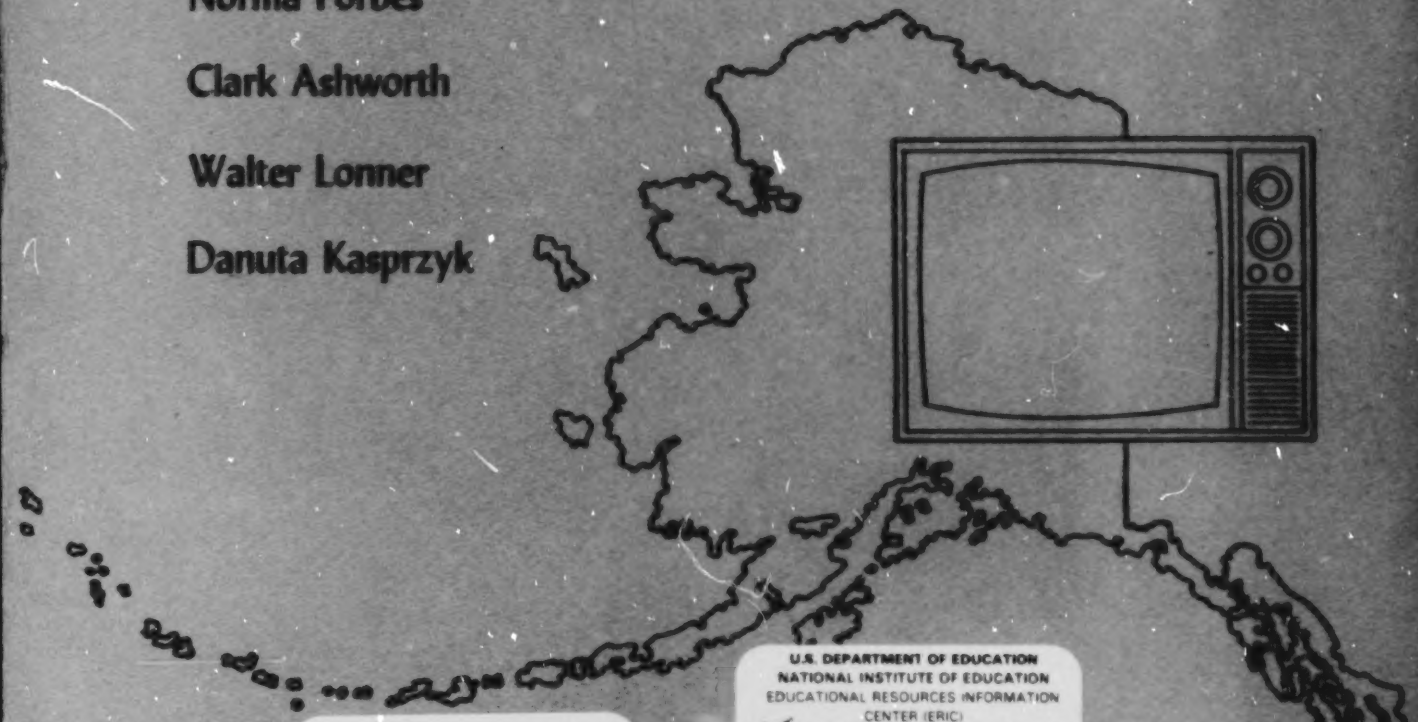

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University of Alaska-Fairbanks
March, 1984

RC014877

SOCIAL AND COGNITIVE EFFECTS OF THE INTRODUCTION OF TELEVISION ON RURAL ALASKAN NATIVE CHILDREN

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Final Report
Submitted to the
Alaska Council on
Science and Technology
Contract 33-82

Center for Cross-Cultural Studies
University of Alaska, Fairbanks
Fairbanks, Alaska 99701

March, 1984

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ACKNOWLEDGEMENTS

As in all endeavors of this kind, this research project could not have been completed without the aid of many people other than the authors of this report. We owe our first thanks to the young people and their parents who participated in this study. The study would not have been possible without their cooperation, and would have been less successful without their interest in the questions it raised. Many other people in each of the participating villages, village leaders and others, aided us over the years. We are grateful for the courtesy and cooperation they extended to us. The teachers and principals of the participating schools were extremely helpful and patient, and we owe them our heartfelt thanks.

The research assistants and test administrators who worked with us contributed in many ways to the study. They are listed here as friends as well as colleagues.

Bob Angaiak	Andrew Reenan	Jeffrey Mann	Frank O'Laughlin
Martha Case	Rita Hunter	Kenny Wells	Rosalyn Corelle
Karen Frederick	Mary Pete	Mark Soelling	Janelle Panamaroff
Irene Heckman	Helen Conwell	Donna Galbreath	Millie Williams
Chad Thompson	Frederica Adams	Charlie Goodwin	Joann Boe

Dr. Danuta Kasprzyk, the research assistant in the 1982 data collection, played a particularly active role in the gathering of the data and its analysis and is listed as an author of this report. We would like to single out Mary Pete and Helen Conwell for their contributions to the project. Mary participated in both the 1977 and 1979 data collections; Helen participated in the 1979 data collection and voluntarily provided greatly needed support services in Kotzebue in 1982. Lynn Johnson also aided us in our search for test adminis-

trators in Kotzebue. Sam Towarak, director of the Chukchi Community College, provided us with a vital contact point in Kotzebue and also a place to train our testers at the college. We thank them all.

Special thanks go to Dr. Robert M. Thorndike, Western Washington University, for lending his time and expertise during the final phase of data analysis. His talents made a significant contribution to our understanding of the complexities of the data.

Since its inception, administrative, logistical, editorial, and secretarial support for this project have been supplied by Dr. E. Dean Coon, Executive Officer, Shirley Sterner, Ruth Glavinovich, and Irma Jean Stichter, respectively. Their level heads and extraordinary competence have contributed to the stability of the project over the years. Words cannot express our gratitude for their support.

We would also like to express our appreciation for the administrative and secretarial support supplied by the staff of Rural Research Resources and its president, Elissa C. Dyson.

Finally, we wish to thank the Alaska Council on Science and Technology which funded the 1982 phase of this research under Contract 33-82. Without its support all the work that had gone into the study since 1976 would have been in vain.

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ABSTRACT

This report presents the findings of a five-year study of the social and cognitive effects of the introduction of commercial television on rural Alaskan children. A variety of social and cognitive measures were given to both longitudinal and cross-sectional samples of grade-school children in 1977, when none of the participating villages received commercial television; in 1979, when half of the villages had television; and in 1982, when all of the villages had at least one year's experience with television. To maximize the ability to detect television effects, villages in several ethnic areas of the state were involved, including both the Northwest and the Southeast.

Television does not have simple or direct effects: most television effects depend on other factors including age, sex, ethnicity, and previous exposure to the "lower 48" majority culture. Nonetheless, television has significant impact on a host of important social and cultural phenomena. Exposure to television strongly influences children's sex-role stereotyping, perceptions of several aspects of both their own and the majority culture, and some cognitive abilities. Furthermore, experience with commercial television affects other media usage of both parents and children, and impacts both their knowledge of the world "outside" and their beliefs concerning the reality of what is seen on television, a window on that world. For the most part, these effects of television are actualized very quickly and although a few phenomena evolve over television exposure, most effects are fully in place after brief viewing experience.

Besides presenting these effects of television, the report includes a comprehensively documented glimpse of the behavioral aspects of television use in Alaska. Favorite shows and the changes in their popularity, viewing time, the parental role in program selection, and other patterns of television use are all reviewed. The implications of these data on state policy are briefly discussed.

INTRODUCTION

In early 1977 the state of Alaska began delivery of public service and commercial entertainment television to selected rural sites via the Satellite Television Demonstration Project. The Demonstration Project serendipitously created a unique opportunity to assess television's effects in a natural field setting. The uniform delivery of one channel of programs throughout the state effectively controlled the viewer's television diet without the need for artificial controls. In addition, certain rural communities were not receiving satellite television while other similar communities in the same geographical and cultural areas were, a situation which provided for an experimental versus comparison group design. Responding to advance notice of this opportunity, the University of Alaska, Fairbanks initiated a longitudinal study of television's impact on rural Alaska. The final data collection for the study was completed in 1982. This report discusses results of the 1982 data collection and the results of the comparisons between the 1982 data and that of previous years. The initial sections of the report present background information on telecommunications in Alaska and on the study itself. The characteristics of the communities which participated in the study and the demographics of the participants are then presented. This is followed by a description of the measures, procedures, and statistical analyses used. The extensive literature on the influence of television in other settings is not discussed; however, Appendix A provides a list of recommended references on the subject.

The Results section of this report opens with an overview of the study's general conclusions. More detailed discussions of the outcomes of each measure follow, and the report closes with a discussion of the study's implications.

Telecommunications in Alaska

In many ways rural Alaska resembles a third world country more than it does the rest of the United States. What economic activity exists is based on export of natural resources, transportation and communication facilities are limited, and its indigenous peoples are struggling to maintain their culture, language and lifestyle against the influence of the majority United States culture. The major groups of Alaska's indigenous peoples (Eskimo, Aleut and Indian) made up about 17 percent of its population in 1976. Three-fourths of these Alaskan Natives live in the state's remote rural areas where their cultural and, in some areas, linguistic uniqueness has been maintained to a degree not possible in urban settings. Roughly two-thirds of Alaska's communities have no access to a highway network. Airplanes, boats, dog teams or snowmobiles provide transportation links--weather permitting.

Alaska frequently has been described as a land of extremes: although it covers an area one-fifth the size of the continental United States, it has the smallest population of any state. Until recently, it covered four time zones; it has six major mountain ranges, half the world's glaciers, and more active volcanoes than any country in the world. These geographical extremes compound the communication problems caused by the distribution pattern and general

inaccessibility of Alaska's small population. Given Alaska's characteristics it is not surprising that the state's decision makers, like the decision makers in less-developed countries, viewed improved communications as central to change and development in rural Alaska. Satellite communications in particular seemed to offer an ideal solution to Alaska's problems.

Other television distribution systems existed in Alaska prior to the advent of satellite communication links. Alaska's major cities were being served by local broadcasting systems not long after the introduction of broadcast television to the rest of the United States. However, these broadcasting systems were not linked to the distribution systems in the continental United States. As a result, national news and other time-value programs reached Alaska by videotape at least one day after they had been broadcast in the "lower 48." Other programming was delayed from one week to several months.

During the '50s and '60s television was generally confined to major urban areas and to outposts served by Armed Forces Television. By the mid-1970s a distribution system which included public and commercial broadcast stations, the Armed Forces Television, cable systems, minitransmitters and translators was delivering television to about 90 smaller towns and villages as well as the major urban areas, serving approximately 85 percent of the state's population. The remainder, for the most part, were Alaska Native residents of small communities in remote areas.

In 1973 the Alaska Public Broadcasting Commission began a "Mini-TV" program to bring television to smaller communities in rural areas. Mini-TV stations used video-cassette tapes mailed to the

villages and broadcast with a low-power transmitter. Although the Mini-TV program was very popular with rural residents, there were a number of complaints about its operation. Delivery of the video cassettes was erratic, often providing a feast or famine situation for the viewers. Segments of a series might arrive in random order, making it difficult for viewers to follow the plot line. Maintenance of equipment, and therefore quality of reception, was frequently poor (Anthropos, 1974). In spite of these drawbacks, by 1979, 18 villages were served by locally owned and operated mini-TV, and its spread was slowed only by the advent of the state-supported satellite system.

Two brief demonstration programs brought television into additional rural villages in the early 1970s. The first, a privately sponsored experiment in the village of Wales, used cable to bring a channel of entertainment programming and a channel of educational programs into each home in Wales for six months (Madigan and Peterson, 1974). In the second demonstration program, NASA's sixth Applications Technology Satellite provided television transmission to fourteen villages for the Educational Satellite Communications Demonstration (ESCD) during the eight months prior to its being placed in its permanent orbit for use by India. ESCD provided four Alaska-oriented and -produced educational programs which were beamed to a receiver placed in the village school. During broadcast hours the school was open to villagers who wished to view the programs (Orvik, 1977).

Commercial television, in the form viewed by most residents of the United States, came to rural Alaska as a by-product of satellite telephone service. In 1975 the Alaska state legislature appropriated funds for satellite telephone service for 100 rural villages which had

previously been dependent on less-than-reliable, high-frequency or very-high-frequency radio for contact with the outside world. The same facilities were to handle emergency and medical communications and were potentially capable of carrying computer data and other signals. It was soon learned that the small earth stations which served the telephone system could be modified, for a comparatively small investment, to receive television. In 1976 the legislature appropriated $1.5 million to modify 23 of the 100 village earth stations and to provide one channel of mixed public service and entertainment television as a one year "demonstration project." The cost of this demonstration was borne entirely by the state of Alaska. Serendipitously, the satellite service also provided, for the first time, "live" news and major entertainment programs, such as the SuperBowl, to the broadcast stations serving the major urban areas. Although the 1976 legislation had funded the demonstration project for only one year, it was widely recognized that neither urban nor rural voters were likely to be pleased by the termination of satellite television service, and in 1978 legislation to continue and expand the system was passed. The intent of the state, as expressed in the 1978 legislation, was eventually to provide satellite television to every community having more than twenty-five residents. In 1981 a second channel was added which would be purely educational and public service, leaving the original channel free for commercial programming. Because the second channel, "Learn Alaska," required the installation of a second receiver, not all villages began reception at the same time.

During most of the time span covered by this research, only one channel was available to the village research sites. During the day, educational and public service programs from various state agencies were broadcast. After 5:00 p.m. (Anchorage time) a potpourri of commercial news and entertainment programs selected from all of the major networks was broadcast. Because Alaska covered four time zones at that time, broadcasts tended to be timed inconveniently for communities in the easternmost or westernmost sections of the state.

With the exception of the state news, most programs were downlinked from the satellite to Anchorage, taped, and rebroadcast via satellite to the entire state at an appropriate Alaskan time. From the research standpoint the most striking aspect of this arrangement was that the same programming, representing the majority United States culture's view of the world, was broadcast to the diversity of cultural groups within Alaska. Many in these groups are as culturally different from the majority as are the indigenous residents of American Samoa, who also received entertainment television as part of a government-funded project. Furthermore, as they had in Samoa, the commercial networks had required the state to broadcast accompanying commercials (Schramm et al., 1980). Ads for McDonald's hamburgers appeared regularly on television screens in remote villages where the meat portion of a meal usually came from a caribou carcass suspended out of reach of the dogs.

Most viewers are unaware that the exclusively commercial nature of most United States television is uniquely American. That a state-supported public service television such as Samoa's educational television or Alaska's demonstration project should automatically

include commercial broadcasts to the home is also peculiarly American. Shortly before the implementation of the demonstration project the original University of Alaska investigators interviewed a visiting colleague from Greenland about television's impact on Eskimos in Greenland (Bjarnasen, 1976). To the surprise of the University of Alaska staff, Bjarnasen said there was little concern about television's impact because (a) television in Greenland originated locally and was locally controlled, (b) programs obtained from Denmark did not have the violence or commercials of programs from the United States, and (c) there was strong support for locally produced programs.

Even before the hardware for the satellite demonstration project was in place the state divested itself of responsibility for program selection. During the first few years that responsibility rested with the Alaska Federation of Natives' (AFN) telecommunications committee. The AFN committee had originally been formed to oversee the technical or hardware installation aspects of the demonstration project, and the majority of its members were non-Native, although employed by the Native regional corporations. No additional funds or staff support were provided for this added committee responsibility. After 1979 the responsibility was shifted to the Alaska Public Broadcasting Commission and a citizens' committee was formed to select programming. The committee, Rural Alaska Television Network (RATNET), consists of twelve representatives from the regional Native corporations and two members at large appointed by the governor.

The research reported here is focused on Native viewers in rural Alaska, although two small non-Native communities were included in the

1977 pre-television baseline study. At the time the satellite demonstration project was introduced, Alaskan Natives constituted almost 20 percent of the state's population, the majority of them living in rural villages. They constituted a much larger Native American percentage of the population than in any other state, and were a significant voting block. As Hills (1981) points out,

> Though small in numbers, villagers are a strong political force within Alaska, and Alaskan Natives command significant political influence at the federal level. Many Alaskans, both urban and rural, see village telecommunications as an important tool in the economic, political, and social development of the state (p. 241).

Researching television's effects

Few research topics generate as widespread interest as the effects of television on children. National organizations, such as Action for Children's Television, are organized around the public's concern about television's effects, Parent-Teacher organizations periodically focus on them, and the federal government has created two major study commissions and funded a multitude of television research projects. Yet the general public remains unsure of just what television's effects are. In part this is the result of a communication problem between the scientific establishment and the public. Comstock et al. (1978) describe the problem in terms of asking the right questions:

> Ask science a question its methods can answer. For example, science cannot tell us conclusively whether television violence contributes to serious crime because its methods are too imperfect. It can empirically test hypotheses whose confirmation or disconfirmation alter the probability that such a proposition is true and verify the consistency of observed fact with such a proposition. Conclusions of a grander sort depend on judgments about the acceptability of certain assumptions and the risk of error that is tolerable. Consequently the argument that there is no conclusive

> scientific evidence on this and other broad causal relationships is not impressive. The wrong question is being asked (p. 3).

The experts in the field of television research agree that television has effects on its audience. The amount of money spent on television advertising each year also attests to a widespread faith in its effects and effectiveness. However, the questions of who is affected, in what way, how this process takes place and when the effects are evidenced are still under investigation (Comstock et al., ibid.; Withey and Abeles, 1980).

Studies of the effects of television in the early 1950s often treated the viewer as a passive recipient of the television message, the tabulae rasae upon which the medium intentionally or unintentionally wrote. As the field of television research accumulated knowledge and became more sophisticated, researchers recognized that as Comstock et al. have pointed out,

> ...television is only one of a number of influential information sources (socialization agents) available to and used by young persons.... Moreover, each of these agents, including television, affect each other as well as the child, and each is to some extent affected by the child.... Although it makes research difficult, this is the way the world operates (p. 286).

Two types of research are needed to answer the who, what, how, and when questions: experimental studies and non-experimental field studies. Experimental studies, because of their rigor, can frequently offer clear-cut answers. However, they are answers to narrowly defined questions, such as the effect of television on middle-class boys. Before results can be generalized, the research must be repeated with girls, with upper class, with older persons, ad infinitum. On the other hand, the validity of non-experimental

studies of television effects is often challenged because media use is embedded in other activities and its presumed effects can be caused by other activities. For example, boys may watch more television and also exhibit more aggressive behavior. The inference that watching more television causes more aggressive behavior will be accepted with more confidence if we control for sex and the exposure-effect relationship is maintained. McLeod and Reeves (1980) note that the proposed effect may actually cause an increase in media exposure rather than the reverse. Longitudinal studies which measure viewers at two or three points in time provide greater opportunities for determining the direction of causation.

The study reported here is a quasi-experimental field study. Its longitudinal design provides additional opportunities for determining the direction of causation. The study includes males and females across an age span of twelve years and from several ethnic groups who have had varying amounts of exposure to the majority culture portrayed on television and varying amounts of exposure to television itself. The complexity of the sample involved strengthens the design but makes analysis difficult. For that reason we have chosen multiple regression for analyses of the major portion of the data from this study. Multiple regression is particularly suited to evaluating specific hypotheses about the influence of several independent variables, such as sex, ethnicity, and television, on a dependent variable. This approach is described in the section of the report on statistical analysis (p. 25). The reader is cautioned that results of such analyses appear experimental in nature but remain correlational

in reality. Although results justify certain causal statements, much remains to be learned about television effects.

THE RESEARCH PROJECT

Background of Project

In early 1977 the University of Alaska's Center for Northern Educational Research (CNER), funded by the then Research Applied to National Needs (RANN) section of the National Science Foundation, collected pre-television baseline data from ten rural villages, five of which were to receive satellite television and five comparable communities which were not (Orvik, Gooding, and Forbes, 1979). For various reasons, CNER elected not to continue with the project in its second phase. One of the original CNER investigators, Forbes, joined with W. J. Lonner at Western Washington University to continue the project in 1979 with new funding from the National Science Foundation's Division of Social and Developmental Psychology (Forbes and Lonner, 1980b). The project returned to the University of Alaska in 1982 with funding from the Alaska State Council on Science and Technology through the University's Center for Cross-Cultural Studies.

The pre-television baseline study used five pairs of village sites within four of the major Alaskan culture areas. Each pair of villages was matched, as much as possible, on size of population, nature of subsistence base, degree of isolation, and other relevant attributes. The sites included one pair of Northwest Inupiat Eskimo, one pair of Kodiak Island Aleut, two pair of Athabaskan Indian and one pair of Anglo-American logging communities. To the extent that the size of each village permitted it, approximately twenty children in grades one through eight were briefly interviewed and given a battery of tests. The cross-cultural design of the sample was ambitious but

the small size of the sample, combined with the variance associated with the age range and cultural differences, created problems in the analyses of the psychological measures used.

Reviewers of the 1979 proposal strongly recommended that the size of the sample be increased. However, less than a third of the amount of funding granted in 1976 was available in 1979. As a result of the funding restrictions and, in some cases, changed conditions within the original sites, five of the original villages were eliminated from the 1979 data collection. One of the two pairs of Athabaskan villages, the two Inupiat villages, and the non-television village on Kodiak Island were retained. These five villages each had populations ranging from 100 to 200 individuals.

In addition to the five original sites, four new sites were selected from those made available by the expansion of the satellite program: another pair of Inupiat villages and a pair of Pacific Northwest Coast Indian (Tlingit and Haida) villages in the Alaska panhandle, each with a population between 400 and 700. As was the case with the old sites, each pair included one village which had been exposed to television and one which had not. However, in the case of the new sites, the television villages had mini-TV rather than satellite television. The two types of television do not provide the same viewing experience because there are no time-value programs such as news or live sports on mini-TV although the balance of the programming is usually the same.

Funding restrictions and increased travel costs again made it necessary to restrict the number of sites in 1982 and only the Tlingit and Haida and the Inupiat villages were retained. Conclusions

reported here emphasize comparisons between these two culture groups although reference is made to data from other culture groups in the 1977 and 1979 data collections. More detailed discussion of the data on the Athabaskan, Aleut, and non-Native groups is contained in the final reports to the National Science Foundation in 1979 and 1980 (Orvik, Gooding, and Forbes, 1979; Forbes and Lonner, 1980b).

Site description

Five distinct cultural groups reside in the areas of Alaska which received their first exposure to commercial television in 1977: the Eskimo (Yupik and Inupiat), the Aleut, the Athabaskan Indian, the Indians of the Pacific Northwest Coast culture (Tlingit, Haida and Tsimshian) and the immigrant non-Native peoples who are primarily, but not exclusively, Caucasian Americans. Within and between each Alaskan Native group there are significant differences in the degree to which the traditional life styles persist. Each Native group has had a different history of contact and interaction with Western culture and people.

The Eskimos are best known outside Alaska and, in general, are the more traditional of Alaska's aboriginal population. Currently they occupy coastal areas and the adjacent riverine environments from the Alaskan peninsula west and north to the northern border of Canada. Anthropological reports of several aspects of their culture are of particular interest in relation to the potential effects of television. In child rearing they stress non-aggressive attitudes and the avoidance of interpersonal conflict (Nelson, 1969; Hippler and Conn, 1973; Coles, 1977). A number of authors have commented on the

extreme leniency of Eskimo child rearing and on their strong emphasis on cooperation (Parker, 1962; Chance, 1966; Gubser, 1965; Spencer, 1952). Traditionally, their social structure did not provide authority roles, and there continues to be a disinclination to assume dominance in interpersonal relationships. Eskimos are reported to possess unusual ability in tasks involving spatial relationships (Berry, 1966; Forbes, 1972; McArthur, 1967; Kleinfeld, 1970); and, unlike most other populations, there are no sex differences in spatial ability.

The four Inupiat villages participating in this research are located in the Kotzebue Basin. None are coastal villages although three are close enough to seasonally exploit marine resources as well as those of their riverine environment. Their economic base is subsistence hunting and fishing, supplemented by a few government and Native corporation jobs, and welfare. Seasonal cannery work in Kotzebue and construction jobs both in and out of the village provide additional sources of cash income. The average education level of Inupiat adults interviewed was eight years in both 1979 and 1982. Although coastal Inupiat have had contact with Europeans since the early whaling days, in the river areas direct interaction with non-Natives is comparatively recent. Mining brought non-Natives to the Kotzebue basin area in the early 1900s but very few non-Natives settled there.

The best general description of the contemporary Inupiat in our study area is contained in Robert Coles' 1977 Eskimos, Chicanos and Indians. Coles did his field work in villages included in this study. He comments on the friendliness and courtesy with which he was

received in the villages, a positive impression shared by the members of this research project who worked in the Kotzebue area.

In distinct contrast to the harsh Arctic environment of the Inupiat, the Pacific Northwest Coast Indians lived in a lush forest environment, warmed by the Japanese current and supplied with abundant resources from the sea, particularly salmon. In this setting a dynamic, complex, highly stratified society with slaves, commoners and nobility developed. Drucker (1955) points out, "That they were able to attain their high level of civilization is due largely to the amazing wealth of the natural resources of their area" (p. 3). Oberg (1973) notes that social rank and material wealth were of primary importance to the traditional Tlingit people. DeLaguna (1965) characterizes the traditional Chilkat (Tlingit) as an arrogant, hard, war-like people. She speaks of the harshness with which Chilkat children were punished and hypothesizes that the hardness, touchy pride, and competitiveness which she saw as characterizing the Tlingit adult were the result of the tensions initiated in childhood experiences.

Historically, Tlingit and Haida raiding parties terrorized their neighbors as far south as Puget Sound. European fur traders were never able to establish true control over the area or break the Tlingit's monopoly over trade routes to the interior. With the sale of Alaska to the United States in 1867, a tide of White settlers began to move in to the rich lands of the Tlingit and Haida to settle and to exploit the forests and fisheries, ignoring for the most part the land's original inhabitants. In little more than one generation, the

Tlingit and Haida, decimated by White men's diseases, went from lords of all they surveyed to minority status in their own homeland.

The Tlingit and Haida are regarded by non-Native Alaskans as the most acculturated of the Alaskan Native groups. As discussed by Parker (1962), more Tlingits hold advanced degrees, have professional positions, or are successful businessmen than is the case for more northern Alaskan Native groups. Logging and commercial fishing provide an economic base for Natives as well as non-Natives in the Southeast area. In both 1979 and 1982 the average educational level of the Tlingit and Haida adults interviewed was twelve years.

None of the participating communities are accessible by road. "Bush" aircraft, which carry mail, freight, and some passengers, serve the northern communities several times a week. During the brief Arctic summer, rivers also provide access; during the winter, dog teams and snow-machines are the alternatives to the airplane. The Southeastern communities are relatively close to Alaskan towns with majority non-Native populations. They have frequent air service from those towns, supplemented by ferry or other boat service. All Alaskan Natives have been and are being exposed to agents of change other than television. One of the more powerful agents of change in recent years has been the 1971 Alaska Native Claims Settlement Act, which created new roles and opportunities and imposed the majority culture's economic organization upon Settlement recipients. Public schools and the Oil Pipeline are two other change agents frequently mentioned.

Selection of samples

As a result of the necessary shifts in sample selection over the

life of the project, as well as the usual attrition in longitudinal studies, description of the sample is complex. The initial sample of 201 in 1977 included ten villages and four cultures. The 1979 sample of 296 was gathered in five of the original village sites (three culture areas) and four new sites, two of which were in a new culture area. One hundred and ninety-two of the subjects in grades three and above in the 1979 sample were from the Inupiat and Tlingit and Haida areas. Only 67 subjects were carried over from 1977 to 1979. The 1982 sample of 367 was recruited in six villages in the two culture areas and included 137 subjects who had been tested and interviewed in 1979 (the longitudinal sample), but only 17 who had been in all three data collections.

Only the Inupiat and the Tlingit and Haida will be included in our description of the 1979 sample. Also omitted from the tables are students in grades one and two in 1979 who received an abbreviated interview and did not participate in the full test battery, although many were retested three years later and included in the 1982 and the longitudinal sample. Tables describing the complete 1979 sample are in Appendix B.

Throughout the life of the study sampling was based on grade groupings held constant across all sites so as to maximize comparability. In the smaller sites schools are so small that two, and sometimes three, grades are contained in the same room and taught by the same teacher. Within the limits of the age cohort for any one year, equal numbers of males and females were included. The main battery of measures and the complete interview were administered to grades three through eight. Naturally, as the study progressed

through the years, subjects went beyond the eighth grade. Those still available in the village were retested in succeeding data collections, although not all measures could be applied appropriately to older subjects. In 1979 a sample of the subjects in grades three through eight and all available retest subjects were included. In 1982 all available subjects in grades three through eight were included, plus those test/retest subjects who were now in higher grades.

As agreed when permission to work in the villages was granted, pseudonyms are assigned each of the participating villages, Inupiaq words for the Inupiat villages and Eagle and Raven for the villages in Southeast Alaska.

The portion of the 1979 sample which will be discussed consisted of 56 percent Inupiat and 44 percent Tlingit and Haida. The mean age was 12.1 and the age range was from 7 to 16 years. At that time the villages designated as Ipnagruat, Nunatchiaq, and Raven had television and the rest did not.

In 1982 the sample was 62 percent Inupiat and 38 percent Tlingit and Haida. It was fairly evenly divided by sex: 52 percent were male. The mean 1982 age was 12.3 years and the range from 7 to 19 years. All villages had satellite television by 1982, and the weighted number of years each village had had television is indicated in Table 1. In weighting exposure to television, a year of Mini-TV was given one-half the weight of a year of satellite television.

The longitudinal sample is very similar to the total 1982 sample: fifty-one percent are male and 57 percent are Inupiat. The group's mean age in 1982 was 14.2 years with a range from 9 to 19 years. The major difference between the two samples is in exposure to the outside

world as measured by an exposure index based on the subject's report of how long and where he or she had lived or visited outside the home village. Although both the longitudinal and the 1982 sample had a mean exposure index of 3.2, 46 percent of the longitudinal subjects versus 29 percent of the 1982 total had never travelled outside their home village or villages in that area.

The sample of adults who were interviewed in 1979 and 1982 was selected from lists of parents of participating students. Sixty Inupiat, Tlingit, and Haida parents were interviewed in 1979, and 139 were interviewed in 1982. Information on current characteristics (language use, etc.) of the two culture areas is included in the interview section under Parent characteristics (p. 46).

Table 1

Number of Subjects and Weighted TV Exposure for 1979, 1982 and Longitudinal Samples by Village, Grades Three and Above

Village:	1 TV=5.5	2 TV=.5	3 TV=4.0	4 TV=2.0	5 TV=2.0	6 TV=4.5	Total
1979	21	22	34	37	42	36	192
1982	44	35	77	69	64	76	365
Long.	10	14	27	29	33	24	137

NOTE: 1 = Ipnagruat
2 = Tapquagruk
3 = Nunatchiaq
4 = Narvaqłuk
5 = Eagle
6 = Raven

Table 2

1979 Sample of Tlingit, Haida, and Inupiat by Age Group and Sex

	Northwest (Inupiat)		Southeast (Tlingit/Haida)		Totals		
	Male	Female	Male	Female	Male	Female	Both
Age group 1 (7 thru 10)	10	10	11	9	21	19	40
Age group 2 (11 thru 13)	29	27	18	17	47	44	91
Age group 3 (14 or older)	17	7	11	12	28	19	47
Total	56	44	40	38	96	82	178

Table 3

1982 Sample of Tlingit, Haida and Inupiat by Age Group and Sex

	Northwest (Inupiat)		Southeast (Tlingit and Haida)		Totals		
	Male	Female	Male	Female	Male	Female	Both
Age group 1 (7 thru 10)	41	30	18	24	59	54	113
Age group 2 (11 thru 13)	36	37	20	24	56	61	117
Age group 3 (14 or older)	45	34	26	22	71	56	127
Total	122	101	64	70	186	171	357

Note: Age information is missing on a few subjects, therefore the total N for Tables 2 and 3 is less than the complete sample.

Procedures

The first step taken by the investigators after they had been notified of the grant award in 1976 was to select the areas in which they wished to work and to seek permission to work there. Their choices were limited by the location of those villages which had been selected to receive satellite television and by pre-existing television reception in some villages such as those near Bethel or near Armed Forces Television receivers. The initial contact was with the Alaska Federation of Natives' (AFN) telecommunications committee, followed by contact with the appropriate regional corporations. After receiving permission to proceed from authorities at the regional level, the investigators contacted the village council, or other appropriate governing body, and the school in the villages they had selected as possible research sites. The governing bodies and the school authorities in the Tlingit and the Haida villages which were added in 1979 were contacted directly.

In all three data collections, like-ethnic testers administered the majority of the measures, particularly those which included material which might be ethnically sensitive. Because the testers were university students in the first two data collections, it was necessary to schedule the data collections during spring vacation to minimize the amount of time they would lose from their classes. For the same reason, in 1977 and 1979 five teams were formed, each to collect data in a pair of villages. Each team consisted of one of the investigators or a graduate student, and one of the like-ethnic testers. In 1979 logistical arrangements allowed "doubling-up" the teams in some sites which proved to be a more satisfactory arrangement

for the teams and reduced the disruption of classes in the participating schools.

The funding cycle in 1982 made use of student testers impractical. Two like-ethnic testers were hired and trained in Seattle for the Southeast research sites and two in Kotzebue for the Northwest. Forbes and research assistant Danuta Kasprzyk did the training for both areas and supervised and assisted administration of the measures and interviewing in all sites. In all three data collections, scheduling and logistics were the responsibility of the investigator or graduate student head of the team. In 1979 and 1982, when additional cognitive tests were added to the battery, the administration of the Kohs Blocks and the administration of the Children's Embedded Figure Test to new subjects was done by one of the team leaders. All interviewing and testing of students was done in the schools.

The initial data collection in 1977 targeted elementary school students in grades one through eight, although the majority of measures were concentrated in grades three through eight. The 1979 and 1982 data collections focused on the same age range and readministered measures to students who had participated previously.

Team leaders, accompanied by a locally hired assistant, interviewed all parents in 1979. In 1982 a simplified parents' interview made it possible for the majority of the interviewing to be done by locally hired and trained interviewers.

Measures

Each succeeding phase of the study necessarily began with a legacy of measures and data from the preceding phase. The initial

University of Alaska phase had proposed three categories of potential influences of television: "active," "replacive," and "holistic." Data from the 1977 study consisted of (1) results of the "active" measures, which included all but one of the sociocultural measures used in 1979 and 1982, (2) mini-ethnographies of three of the research sites from the "replacive" category, and (3) results of the Children's Embedded Figure Test (CEFT) from the "holistic" category. The 1979 study used the ethnographies for training and interpretation of data, added one new measure, Sex-Roles, to the socio-cultural (active) measures and added five new measures to the cognitive (holistic) measures.

The following measures were dropped from the battery in 1979: the Circle Matrix, the TV Test (TVT), the Aggression Testing Unit (ATU), and some of the "Gerbner" items in the questionnaire. The Circle Matrix was a cooperation/competition game adapted from Kagan and Madsen (1971). Although it was a successful segment of the test battery in terms of interest to the subjects, it elicited such uniformly high competitive behavior from subjects in all culture areas (including Eskimo) that it was useless for measuring the hypothesized increase in competitiveness expected to result from viewing television. The TVT, a variation on the Thematic Apperception Test, and the ATU were dropped from the battery because they were very time consuming to administer. The items adapted from Gerbner and Gross's (1976) Cultural Indicators Index which asked about the percentage of people employed in different occupations, such as law enforcement, were dropped because it was difficult for the children to understand estimating percentages and because the pre-television children greatly

overestimated actual percentages, making it impossible to test Gerbner's hypothesis that television distorts perceptions in the direction of overestimation.

The five cognitive measures added in 1979 were: the General Embedded Figures Test (GEFT), Kohs Blocks, Raven Matrices, Peabody Picture Vocabulary Test (PPVT) and the Standard English Repetition Test (SERT). All of the cognitive measures except the GEFT and the SERT were retained in the 1982 data collection. The GEFT had been included in the test battery in 1979 because it was described as an extension of the CEFT for subjects beyond the sixth grade. The data from 1979 indicated the description was not accurate. The SERT was dropped in 1982 because the 1979 sample had been too small to justify retesting. All of the cognitive tests are described in the RESULTS section of this report. Table 4 presents the measures used in the 1982 data collection with the number of students administered each measure and the age range applicable to each measure. A comparable table for the 1979 measures can be found in Appendix B.

Statistical Analyses

Analytic Model

Natural Experiment. This study can be seen as an example of a natural experiment, i.e., a manipulation was applied, followed by systematic observation. In the study the manipulation of interest is the introduction of television. Observation consists of the lengthy process of testing, interviewing, etc. The manipulation is a typically complex natural phenomenon in that both the introduction of TV and its effects have many facets and causes. This complexity is

Table 4

Grade Range for 1982 Measures

	Grade 3 & 4	Grade 5 & 6	Grade 7 & 8	Above 8th	Total N	Test/ Retest
Children's Interview	———	———	———	*****	367	137
Sociocultural						
Attitudinal		———	———	*****	240	66
Semantic Differ.	———	———	———	*****	348	122
Which-Pich	———	———	———	*****		
Rosenzweig P-F	———	———	———	*****	262	100
Sex-Role	———	———	———	*****	343	90
Cognitive						
CEFT	*****	*****			37	37
Kohs Blocks	———	*****	*****	*****	122	29
Raven Matrices	———	*****	———	*****	221	74
PPVT	———	*****	———	*****	219	76

Note: ***** indicates retest subjects only

reflectod in outcome: all impacts of TV in this setting are likely to be complex, caused by the very real interplay of many different factors. The analytic model chosen for the study had to allow for this complexity.

Another way of saying this is that the analysis of data resulting from the study had to accommodate three types of causal factors: characteristics of the student participants not related to TV (Subject factors), TV itself, and combinations or interaction between these two (Subject x TV factors). Examples of subject factors include age, sex, and other individual differences among the children studied. TV as a factor includes the amount of exposure to television experienced.

Subject x TV factors include the necessarily greater exposure to TV for older children, differences in exposure between boys and girls, etc.

Non-independence of Factors. Part of the complexity associated with this study is due to the lack of independence among the factors of interest. All those factors are more or less correlated. This consequence of a natural experiment is unavoidable and must be captured by analysis. Although non-independence of possible causal factors compounds problems of analysis, it also adds to the realism of results. That is, analyses which explicitly consider naturally existing correlation should also yield results more attuned to the actual phenomena.

Several classic analytic models are available to be applied to data sets such as that collected in this project. These include the analysis of variance and multiple regression models. Both of these models are methods of analyzing the contributions of predictive information, or independent variables, to systematic changes in some outcome, or dependent variable. The two are virtually identical in an algebraic sense; however, analysis of variance was developed to analyze data from rigidly controlled experiments where all independent variables are just that: independent or not correlated. In general, this characteristic of true experiments is achieved by randomly assigning equal numbers of subjects to all possible combinations of independent variables. When equal numbers are not available, predictor variables will be correlated, a situation inappropriate for analysis of variance.

Almost all naturally occurring phenomena have non-independent causes and are not suitable for an analysis of variance. In particular, this study of TV effects in Alaska utilizes existing groups where the analysis of variance requirement of independence of causes is not met. This situation is well suited to the requirements of multiple regression.

Multiple regression was developed as a method of examining existing covariation among variables in non-experimental situations, i.e., when no assignment to conditions or levels of independent variables is possible. Two major indices are produced by this analysis: the multiple correlation and the regression coefficient. The reader is directed to any of a number of excellent texts describing the tenets and procedures of multiple regression and other correlational techniques, for example, Thorndike (1976), Edwards (1976), or Kerlinger (1973). The multiple correlation (R) is the correlation between a dependent variable (outcome) and a weighted linear combination of independent or predictor variables. As a correlation, the squared multiple correlation (R^2) represents common or shared variance--the extent to which the predictors in combination are able to reliably predict outcome. Regression coefficients (b) are those weights assigned to predictors to yield the "best fit," the linear combination of predictors that maximizes R and can be thought of as the contribution each predictor makes to the outcome. Each b represents the change in outcome associated with a one unit change in that predictor.

Independent Variables

Subject Variables. Certain subject characteristics were brought into this study by the children irrespective of television and its introduction. These are both differences among the children and differences among the groups of children and include: sex, age, ethnicity, village size, and interactions among these. In the current analyses each of these subject variables was coded in a consistent manner:

Sex	0 = Male
	1 = Female
Age	1 = 7 - 10 years
	2 = 11 - 13 years
	3 = 14 - 19 years
Ethnicity	0 = Eskimo
	1 = Tlingit and Haida
Village Size	0 = Small
	1 = Large
Exposure	0 = Little exposure to majority culture
	1 = Much exposure, lived "outside," etc.

The various combinations or interactions among these subject variables are represented by the products among the coded levels. Two-way and three-way interactions, e.g., sex x area, sex x age, area x age, sex x age x area, were used in analyses.

TV. Television as a predictor was also coded in a manner specific to the analyses to be performed. The actual exposure to TV could be described as time TV was available to the children in each

village. This ranged from 0 years for about half the children in 1979 to 5.5 years for some children in 1982. In both study periods the distribution of TV exposure fell naturally into a dichotomy:

1979:	0 = No TV exposure
	1 = Any TV exposure
1982:	0 = Up to 2 years TV
	1 = 2 or more years TV

Subject x TV Interactions. As with the interactions among subject variables, interactions among subject and TV variables were represented as the products among them. These included two-, three- and four-way interactions, e.g., sex x TV, age x area x TV, etc.

Dependent Variables

All outcomes that could be considered to be reasonably continuous variables were used as dependent variables in the regression analyses. These included: Scales from the Osgood Semantic Differential, Sex Roles scales, Peabody Picture Vocabulary Test, Which-Pich scale, Children's Embedded Figures Test, Raven Progressive Matrices, Kohs Blocks, scale from the Rosenzweig Picture Frustration Test.

Design

The unique aspect of this study is the availability of data from several waves or data collection periods: 1977, 1979, and 1982. This allows for several different yet complementary ways of examining the results. Results from many measures may be looked at cross-sectionally for at least two waves and longitudinally across different waves. For the most part, so little data are available from 1977 that no longitudinal analyses are possible from this initial part of the study.

Cross-sectional. Analyses within each wave of data collection are intended to estimate the ability of each class of independent variables (Subject, TV, and Subject x TV) to predict each dependent variable separately. That is, within a given period of data collection, are there statistically significant relationships between the predictors and the dependent variables? Since two cross-sectional analyses are possible for each dependent variable, similar results lend robustness to the findings.

For example, if TV and its interactions with subject variables are shown to reliably predict a given dependent variable in 1979, we can conclude a TV effect. If the same relation holds in 1982, the finding is both continuing and more convincing. Since the 1982 sample includes some but not all the same children as the 1979 sample, such results should be considered evidence for continuing impact of TV, if not on the same children in each wave, then on the younger children picked up by the 1982 data collection. At the same time, the replication of a result in two separate waves lends strength to conclusions about the effect.

Longitudinal. Perhaps the strongest feature of the design of this study is its longitudinal character. Approximately 137 children tested in 1979 were retested in 1982--allowing for a pre-post comparison across the intervening years. In the regression analyses the 1979 data were used as covariates for the dependent variables collected in 1982. That is, each child in the longitudinal sample served as his or her own control for predicting the results obtained in 1982. Such a design provides for a great increase in power of analysis, an increase in the ability to detect true effects since a

large amount of the variability among subjects can be explained in terms of the 1979 or covariate data.

Cross-sectional/Longitudinal. Finally, the cross-sectional and longitudinal nature of this study allows for well-tuned conclusions about consistent effects--separately in two different waves of data as well as across time in the same sample of children. At the same time, this design can provide information about more subtle effects including basement or ceiling effects--relatively fast-acting impacts of TV that do not continue. Such effects should show up in each cross-sectional "glimpse" at the impact of TV but not in the longitudinal analyses.

Regression Analyses

Step-wise multiple regression analyses were performed using the Statistical Package for Social Sciences (SPSS) suite of software (Nie et al., 1975). These analyses captured the likely sequence of causality among the independent variables while preserving the naturally existing covariability among all variables.

Order of Entry. All regression analyses were performed in the same fashion. First, the subject factors were used as predictors, regressing the dependent variables onto age, sex, etc. The multiple correlation achieved at this point was noted. Second, the single independent variable TV was added to the prediction equation. The change in the squared multiple regression correlation was further noted. Finally, interactions among the subject factors and TV were added and the subsequent increase in the squared multiple correlation noted.

For several dependent variables an additional step was undertaken: all predictors with age information omitted were used in a separate regression. The ability of all independent variables except those related to age to predict outcome was indicated by the multiple correlation squared resulting from this analysis. This type of analysis was undertaken for dependent variables where age might be expected to contribute heavily, e.g., cognitive measures.

Interpretation. Each of the squared multiple correlations or the differences among them obtained by this procedure can be interpreted as effects of subjects, TV, or subjects x TV factors. These effects can be thought of as a sequence of questions--each addressed by the results of progressively more complete (and correspondingly more reflective of reality) regression models.

Using subject variables alone represents a look at relationships among children's characteristics and the dependent variables without consideration of TV effects. How do the results of the measures used compare to subject factors in the absence of TV? This result represents a baseline upon which TV effects will build.

The increase in test variance accounted for when TV is added to the prediction equation represents the pure effects of TV alone. Although the multiple correlation will always increase when additional predictors are used, a test of the significance of the increase reveals if this is a chance effect or a reliable relationship. Does TV by itself affect the dependent variable? Or is the effect of TV more complex, e.g., TV affects the outcomes of interest in this study but only as mediated by other factors including age, sex, etc.

Adding the joint effects of Subject x TV factors to the model yields information about the more complex interplay of both subject and TV factors. Are there differences in the impacts of TV on various groups of children? Does sex, age, or ethnicity play a role in how TV affects the subjects of this study?

RESULTS

This section opens with a general overview of the results of analyses to date. More specific discussions of the measures used and their analyses follow the overview. The discussion of the interviews includes a section on parent characteristics which might affect their children's reactions to television. Almost all of these characteristics appear to be related to culture area rather than to differential exposure of parents to television. The results discussed represent the outcomes of the initial analyses of the data. Further, more detailed analyses in progress are expected to clarify relationships and provide additional information on television's effects.

Overview

Has television had effects on Native children in rural Alaskan villages? The answer is an unequivocal YES. However, as discussed in the Researching television effects section of this report, television usually does not have an overall, blanket effect on all viewers, nor do all effects manifest themselves in the same manner. Instead, the effect of television is complex: it affects outcomes but only as mediated by the characteristics which the viewer brings to the viewing experience. Some effects are immediate and obvious; others take a longer time to manifest themselves. Some effects rapidly reach their ceiling and are maintained at that level, while others continue to increase over time. The complexity of the samples involved in this research, the different age levels and ethnicities for example, add to

difficulty of explaining the effects. However, such complexity should make the results more attuned to the real world.

The viewing patterns of both children and adults vary with the characteristics of the viewer. Tlingit and Haida parents and their children watch fewer hours of television than their Inupiat peers. Better-educated parents watch fewer hours of television than the less-well-educated. This may change over time as it has elsewhere in the United States where the best educated now watch about as much television as their less-well-educated neighbors. The top program choices are "Dallas" for the adults and "Dukes of Hazard" for the children. Yet even these choices are made by a minority of respondents within each group: only 18 percent of the children named "Dukes of Hazard" as one of their favorites. Adults are somewhat more consistent, and almost one-third named "Dallas" among their favorite programs.

Exposure to television improved parents' knowledge of world affairs, but it did not serve to equalize knowledge among viewers. Parents in Southeast continue to be more knowledgeable about world affairs, reflecting their greater access to formal schooling in the past.

Television has affected the use of other media, almost completely eliminating movies in the villages and making sharp inroads into the use of the radio. Television replaces the entertainment and information functions of movies and the radio but it does not replace their social functions and this may, in the long run, have the more profound effect on the lives of the viewers. Radio has served to maintain regional identity while television, unless its form is

altered in the future, primarily delivers the message of the majority American culture straight from the urban areas in the "lower 48." Responses to interview questions also indicate that television is strengthening the importance of nuclear family ties among both children and adults, at the expense of identity with the community. This may be a positive or a negative effect, but it is a trend in the direction of the majority culture pattern of social interaction. The effect on children's recreational reading of books is as expected: television causes an immediate drop in the reading of books, and that effect is maintained. On the other hand, it is associated with an increase in the reading of certain types of magazines. The reading of news magazines among the young does not change, and the reading of Alaska magazines drops, but the reading of magazines such as Teen, Off Road, and People, which present the models and material possessions displayed on television, increases.

Although we have no list of pre-television desires to compare with the answers to our question on what commercial items they saw on television that they wanted, the frequent use of brand names and the nature of the items desired (cars, clothes, games) suggest that television has increased the desire to acquire majority culture material possessions.

Television has not affected the kind of knowledge and attitudes which might make acquisition of material possessions and functioning in the urban areas easier for its young viewers. There can be little doubt that the youngest children come to school better prepared because of "Sesame Street." However, children in grades three and above showed little overall effect on their knowledge of formal

English vocabulary as a result of television. This is not surprising since learning a language is an interactive, not a passive, process and the pictures on television make it possible to follow the main theme of the story without seeking definitions for words not understood.

Cognitive effects of television are expressed in complex ways. A considerable body of research evidence in the past has demonstrated that the Eskimo possesses superior spatial-perceptual ability. This ability was thought to be associated with subsistence activities related to the tundra and marine environment in the far North. It was hypothesized that viewing television, which restricted outdoor activities, might decrease these spatial-perceptual abilities over time. On the other hand, research in Israel had indicated that certain spatial-perceptual abilities might be improved by watching television (Salomon, 1979). Analyses of the cognitive data indicate that television has had an impact, but it is a very complex effect with different groups of students showing different effects. Additional analyses are needed to clarify interpretation for most cognitive data. The exception is the skill related to seeing embedded figures, which involves visual exploration and attention to detail. Improved scores for the embedded figure skill are directly related to television, as they were in Israel.

For children in the continental United States, television has been shown to be an important source of information about occupations and a more potent source of information about occupational status than either personal contact or the general community culture (DeFleur and DeFleur, 1967). However, exposure to television has had no effect on

rural Native children's range or level of occupational and academic aspirations. Such an outcome is not surprising when one considers the paucity of Native American role models on commercial television.

With the idea that viewing programs that were dominated by Whites in occupational roles might affect students' perception of their chances of entering the job market, a question about discrimination in employment was included in the measures. Television was not a factor affecting perception of discrimination but culture area was. Students in the Southeast were more likely to perceive discrimination than those in the Northwest. Within the Northwest, females were more likely to perceive discrimination than were males. Adults in Southeast and women in Northwest are more likely to have entered the cash economy job market, and their experiences may have influenced students' responses. Overall, students' perceptions of discrimination in the job market dropped noticeably between 1979 and 1982. Although there is a decrease in feelings of possible discrimination, there was no increase in the percent of students who thought a Native would get the job in response to an item which asked which person pictured (Native, Black, White) would get the job if all were competing for the same one. In both 1979 and 1982 at least half of the respondents thought the White pictured would get the job. However, there was a major increase from 1979 to 1982 in the number of respondents who thought the Native male would be the most competent person to repair a snowmobile or outboard motor, and there was an increase in the number who would choose the Native pictured to invite home for dinner. Forces in the society other than television seem to be responsible for those changes in attitude.

Native parents interviewed in 1979 expressed concern about television's possible influence on their children's desire to move away from the villages. Analyses of children's responses to the question about where they would like to live when they are adults indicate that other agents of change may affect the desire to emigrate but television does not. Approximately two-thirds of the students expressed the desire to live somewhere other than in their home village or the surrounding area when they were grown. Students in smaller, more remote villages were more likely to want to live in the village as adults. The desire to migrate is associated with living in a larger village, with being from Southeast Alaska, and with having lived or visited outside the home village, but desire to migrate is not associated with television exposure.

Studies elsewhere in the United States have clearly established that viewing violent television programs increases aggression (Comstock et al., 1973). Restrictions of time and funds made it impossible to directly evaluate the effects of the introduction of commercial television on rural students' aggression. A measure of "fantasy" aggression, a cartoon measure of responses to frustration, did not show measurable evidence of an increase in fantasy aggression associated with the advent of television. There was some evidence in 1979 indicating that exposure to television prevented the normal drop in aggressive responses which usually accompanies adolescence, but the 1982 analyses did not reaffirm that effect.

Interviews with teachers in 1979 indicated that when television is first introduced in an isolated village, Native children work hard at learning what on television is real and what is not. Teachers

reported that when television was new they were bombarded with questions every morning about the reality of programs which had appeared the previous evening. Most students rapidly learned that programs such as "Charlie's Angels" and "Dukes of Hazard" were not actually occurring as filmed but were fictional events portrayed by actors. This is important because the viewer's perception of how "real" the portrayed action might be has been shown to influence the tendency to imitate that action. Viewers who believe portrayed violence is real, as in a documentary program, are more likely to imitate.

A series of questions about the reality of several popular programs was included in the student interviews. Another series of questions comparing "village life" and "television life" was included in the Attitudinal questionnaire. The first of the interview questions asked whether the program was about real people and things that really happen. The other questions were more specific, and included such items as whether a character's name was his real name and what he/she did after the show. Results from both series of questions suggest that students are responding to the questions in terms of two dimensions of reality. The first dimension deals with whether the pictured events are occurring spontaneously and involve ordinary people, not actors, e.g., the distinction between a situation comedy and news clips. The second dimension involves what Gerbner and Gross (1976) refer to as "social reality." That is, is the behavior portrayed within the range of usual, accepted and probable behavior for that particular society?

Students in Southeast (who'd had more exposure to the majority culture), and those who'd had longer exposure to television consistently responded to the interview questions in a pattern which indicated that the show and the characters were not real in the sense of the first dimension, but that they were representative of social reality. The responses to the "village life" versus "television life" questions followed the same pattern for those with longer exposure to television. This response pattern is consistent with the findings of George Gerbner and his associates that heavy viewers of television come to believe that the real world is like the television world, e.g., that the percentage of people employed in law enforcement is the same as portrayed on television.

Since the sixties, critics have been concerned about the impact of television on minority students' images of themselves and their own ethnic group. They also have been concerned about what children in general learn from television about other ethnic groups. Much of this concern has been centered around the image of Blacks on television; therefore, a measure of the stereotype of Black people was included with the measures of Natives, Whites, and self.

The stereotype of Blacks that might be held by students was of particular interest because, in 1977 when the measure was introduced, most village students rarely had had direct interaction with Black people. Therefore, any changes in the measure could more readily be seen as an effect of television. Coincidentally, the mini-series "Roots" was shown in the television villages between 1977 and 1979. There was a clear and unmistakable effect on viewers: the stereotype of Blacks became more positive in television villages. However, it

was not possible to tell whether this was attributable to television in general or to "Roots" alone. The 1982 analyses suggest that the initial dramatic effect of "Roots" is not maintained for all viewers but that television in general has a small positive effect on children's image of Black people.

There were no indications that television had affected Native students' images of their own group or of White people. This is understandable since there are other sources of information available to them within their village environment about Native people and White people. After the first two years of television, i.e., in 1979, there was no indication of an impact on self-image; by 1982 results suggested that television may have a small but significant detrimental effect on students' self-image.

In another area of stereotyping, television has often been criticized for its stereotyped portrayals of women. Researchers have documented the biased picture which television presents, but there has been relatively little research evidence of its effect on viewers. This study has produced clear evidence of an increase in sex stereotyping as an effect of exposure to entertainment television. The effect is both a "blanket" effect, increasing stereotyping among all viewers, and a specific effect affecting some viewers more than others. Differences in sex stereotyping existed before television was introduced: students in Southeast were more stereotyped in their thinking about the sexes than were those in the Northwest. Anthropological evidence from the two culture areas suggests that such stereotyping may have no necessary relation to the status of women

within a society, nor a simple relation to the positions of power that women may hold.

The same type of measure used for ethnic stereotypes was used to assess children's attitudes toward village life versus life in Anchorage. Attitudes toward Anchorage did not seem to be affected by television. There is some evidence, however, that greater exposure to television is accompanied by a more negative attitude toward life in the village. This evidence does not seem to be directly related to the desire to move away from the village, which was discussed earlier, as the desire to move is influenced by factors other than television.

Interviews

In 1979, and again in 1982, all student participants in the research were interviewed. A small sample of parents of participating students (ten parents per village) also was interviewed in 1979. In 1982 a larger sample of parents was interviewed, i.e., 127 from the six villages participating in that data collection. Twenty-four of the 1982 parent interviewees were male and 103 were female. The majority of 1979 parent interviewees also were female, probably reflecting their greater availability during interviewing hours.

The interview questions were designed to assess attitudes and opinions about television, individual language use, viewing habits, program preferences, perception of television's reality, the attractiveness of the lifestyle portrayed, and television's impact on daily life in the village. A third, less structured, interview was used with a small sample of teachers and Native leaders in most villages in both 1979 and 1982. The majority of the questions used in 1979 were repeated in 1982 although interviews for the two data

collections are not identical. The format of the 1979 interviews reflected the fact that half of the participating villages in that year did not have television yet, while all participating communities had television by 1982. An additional difference between the two years is that in 1979 two of the three "television" villages had mini-TV rather than satellite TV, while all villages had satellite TV in 1982. Many questions were taken from previous television research, particularly research in the Canadian Arctic, permitting a broader basis for comparison.

The following discussion integrates and compares results from interviews from the two years for the Inupiat Eskimo and Tlingit and Haida participants. A more extensive discussion of the interviews of the complete 1979 sample, including the Aleut and Athabaskan Indian subjects, is available in Forbes and Lonner (1980a). Three distinct samples of Inupiat and Tlingit and Haida student interviewees will be discussed, i.e., the total 1979 sample of those ethnic groups (N=192), the total 1982 like-age sample (N=376), and the test/retest or longitudinal sample (N=137). Each parent sample (1979 and 1982) will be considered separately as there was not enough overlap to justify a longitudinal sample analysis. In reporting interview responses, as in the analyses of other measures in the study, the influence of ethnicity, age, sex, and degree of exposure to the world outside the village, as well as length of exposure to television, will be considered. Appendix C contains additional tables of responses from the children's and the adults' interviews which have not been included in the main body of the text.

Adult interviews were conducted in homes or by appointment in schools both years. A token honorarium of $4 was paid to each adult participant upon completion of the interview. Some parents were not available because they were out of the village during the project team's stay or because of other obligations. Less that one percent of the parents contacted declined to be interviewed. Children's interviewing was done in the school by the like-ethnic test administrators, with some assistance from the principal investigator and the project research assistant.

Parent characteristics

Over the past twenty years research has increasingly emphasized the role of the family in ameliorating or supporting television's influence on children. Differences in child-rearing practices are among the factors identified as mediating television's effects (Korzenny, Greenberg and Atkin, 1979). For this reason, among others, the contrast between the Tlingit and Haida and the Inupiat participants in this study was an important factor in its experimental design. A number of differences, i.e., between the traditional cultures, geographic settings, and history of contact with Europeans, of the Tlingit and Haida Indians of Southeastern and the Inupiat Eskimo of Northwestern Alaska were noted in the Site description section of this report. Appendix D, authored by anthropologist Rosita Worl, provides current information on the two culture areas with an emphasis on the role of women. Contemporary differences, and similarities, in language, education, values, attitudes and expectations which were explored through a series of items in the interviews are reported in the following sections.

Language. Of the villages participating in this study, Ipnagruat, Narvaqiuk and Nunatchiaq are classified by Krauss (1974) as communities in which "some but not most" of the children speak their Native language, while in Tapquagruk, Raven and Eagle "few or none" of the children speak the language. In contrast, in 1982, 93 percent of the Northwest parents (Ipnagruat, Tapquagruk, Nunatchiaq, NarvaqIuk) and 35 percent of those in Southeast (Eagle, Raven) reported they used their Native language. However, even in the Northwest, 40 percent said they had learned English first as a child and 75 percent made the same statement in Southeast. In the Northwest about one-third of the parents report that they speak their Native language with other adults, another third speak both English and Inupiaq, and the balance speak only English. Half of the Inupiat parents speak English at home with their children, 43 percent speak both, and the balance speak Inupiaq. The percentage of children reporting their parents speak Inupiaq (22 percent), or both (50 percent), in the home is higher than that reported by parents. However, that may be because Native-language speaking parents contribute more children per family to the student sample. Although half of the Inupiat parents speak English to their children, 93 percent of them consider it "very important" that their children be able to understand their Native language, and the balance consider it "may be important." No Inupiat parent considered it unimportant for his or her children to understand their Native language. Eighty percent of Northwest parents report their children can understand their language and seventy-three percent report the children can speak it. No attempt was made to have the parents operationally define what they meant by "speaking" or

"understanding," which probably explains the discrepancy between Krauss's classification and the parents' reports. As would be expected, a much larger percentage of the Tlingit and Haida children report that their parents speak English at home. Almost all Tlingit and Haida parents (98 percent) report that they speak English to both adults and children; however, 23 percent feel that their children can understand their Native language. The children's own reports of what language they speak with parents, friends, and siblings, as well as the language their parents speak at home, are presented in Table 5.

In a related question parents were asked which language they thought should be broadcast on television. In the Northwest the majority of respondents would prefer that both English and their Native language be used on television. In the Southeast the majority would prefer English although between one-fourth and one-third of the respondents did express the desire for use of both English and their Native language.

Expectations. Parents in the two areas also differ in their aspirations and expectations for their children. They were asked whether they wanted their children to live in their home village when they were grown, whether they expected their children to live in the village when they were grown and whether they themselves planned to move away from the village. In 1979 parents were also asked where they and their own parents were born.

Of the 139 parents who were interviewed in 1982, 95 percent stated that they did not intend to move away from their home village. There was no significant difference between Inupiat and Tlingit and

Table 5

Children's Reports of Language Use: Percentage of Sample

	Like-age Samples						Longitudinal Sample					
	1979			1982			1979			1982		
Language spoken	E	N	B	E	N	B	E	N	B	E	N	B
By parent at home												
Northwest	6%	12	82	28	22	50	10	15	75	23	16	61
Southeast	92	4	4	82	2	16	92	4	4	84	0	16
With parents												
Northwest	84	1	15	82	2	16	91	1	8	82	0	18
Southeast	99	1	0	100	0	0	99	1	0	100	0	0
With siblings												
Northwest	95	0	5	91	1	8	96	0	4	93	0	7
Southeast	100	0	0	100	0	0	100	0	0	100	0	0
With friends												
Northwest	97	0	3	91	0	9	99	0	1	99	0	1
Southeast	99	0	1	100	0	0	100	0	0	100	0	0

Note: E = English
N = Native Language
B = Both

Haida respondents. However, responses to the question "Do you want your children to live in (village) when they grow up?" revealed three-quarters of the Inupiat parents wanted their children to live in the village in contrast to only half of Tlingit and Haida parents. Furthermore, almost twice the percentage of Inupiat as Tlingit and Haida believe their children actually will live in the village. Roughly twice the percentage of Tlingit and Haida than Inupiat parents said they did not wish their children to live in the village as adults. Also of interest is the percentage of parents in each area who said it was "up to the kids" where they lived as adults, 7 percent

of the Inupiat and 25 percent of the Tlingit and Haida. Only one of these responses showed the effects of television exposure; parents with greater television exposure were less likely to believe their children actually will live in the village as adults.

Information from the 1979 interviews on the parent respondent's own residential mobility provides further evidence of differences between the Inupiat and the Tlingit and Haida parents. Ninety-eight percent of the Inupiat interviewees and ninety-five percent of their parents were born in their home village or the surrounding region, as compared to sixty-nine percent of the Tlingit and Haida adult respondents and fifty-three percent of their parents. In 1979 the percentage of parents who wanted and expected their children to live in the village as adults was from 9 to 30 percentage points higher in each of the villages although the response ratio between the two ethnic groups was the same. Unfortunately, because of sampling problems in the 1979 parent data, we cannot statistically compare the 1979 and 1982 samples with any degree of confidence. The attitude differences expressed by these two groups of parents in regard to their children's future mobility suggest that the contrasts between their value systems which were reported by Parker in 1962 have been maintained. In his discussion of the educational values of Eskimo and (Tlingit) Indian parents he noted, "The familistic values of the Eskimos often tend to hinder (their children's)...mobility" (p. 236).

Aspirations. As was the case in 1979, Southeast parents in 1982 held higher educational aspirations for their children than did Northwest parents. For both sons and daughters Southeast parents desired an average of 15 years of education while Northwest parents

desired an average of 13.5 years, a statistically significant difference. Fathers' aspirations for their children were lower than mothers', about one year less in the Northwest and about one quarter of a year less in Southeast. Parental aspirations were related to their own educational level only among the better educated in the Northwest. For the rest of the sample poorly educated parents were just as likely as better educated parents to desire higher education for their children.

Occupational aspirations for their children also differed by area. Twenty-five percent of Southeast parents versus ten percent of Northwest parents named professional or technical occupations in response to the question "what would you like to have your children do to earn a living when they finish school?" Almost ten percent of Northwest parents would choose subsistence (hunting, fishing, trapping) for their children while no Southeast parent made that choice. Also of interest is the difference between the two areas in the number of parents who responded it was "up to the kids." Many more Southeast than Northwest parents (52 percent vs. 20 percent) said it was "up to the kids." The same response pattern was seen in the parents' opinions on where their children should live (see p. 50). On the other hand, many more Northwest than Southeast parents answered "don't know" or gave answers which were classified as "indeterminate," e.g., "work," "have a job."

Comparing male and female interviewees in the total sample, it is clearly the mothers who aspire for their children to become professionals. Mothers are also less likely to give "indeterminate" answers. Professional aspirations are almost exclusively expressed by

those interviewees who have achieved the middle (8th through 11th grade) or upper (high school graduation or above) educational level, and the middle educational level aspirations are entirely focused on their children becoming teachers, while aspirations of the best educated spread across a number of choices, including teacher, lawyer, and scientist. As would be expected, the number of "indeterminate" responses shrinks as the parental educational level rises, both educational level of the respondent and educational level of the respondent's spouse. Television was not associated with parents' aspirations for their children.

Television use

Viewing patterns. In the years between 1979 and 1982 television set ownership as reported by students rose from 91 percent in the television villages to 100 percent in all the participating villages. The average number of viewing hours on school days (3.9) remained the same. However, the correlation between the viewing hours reported in 1979 and 1982 by respondents in the longitudinal sample was low ($r=.19$) and not significant. As can be seen in Table 6, parents' reports of how much television their children watched were higher than that reported by the children themselves.

Both parents and children in the Northwest consistently reported more television viewing than those in Southeast. Although the average Southeast parent is more highly educated than the average Northwest parent, and increasing education appears to be associated with decreased television viewing, the differences in viewing hours cannot be explained by the educational difference between the areas. The trend

Table 6

Parents' and Children's Reported Television Viewing Hours, by Culture Area

Culture Area	Weekdays	Saturdays	Sundays
Inupiat (NW)			
Parents	6.0	5.3	5.3
Children	4.3	5.6	4.5
Parent/Child	6.7	5.5	5.5
Tlingit/Haida (SE)			
Parents	4.8	4.4	4.4
Children	3.34	6.0	3.6
Parent/Child	4.4	4.8	4.8

Note: Parents: parents' report of own viewing hours
Children: child's report of own viewing hours
Parent/child: Parents' estimate of child's viewing hours.

toward viewing less, associated with increased education, exists in both areas, and in area comparisons within the same parent education level, Southeast parents watch less.

Parents' estimates of their own viewing hours and those of their children were significantly correlated. Only Southeast parents' estimate of their children's weekday viewing also was correlated with the children's own report of their weekday viewing (r=.20). However, the two estimates were not significantly correlated for weekend viewing hours for either set of parents, nor were parents' own and children's own reports of their weekday viewing.

Program preferences. Of the students' four top program choices in 1979, only "Happy Days" remained on the schedule in 1982 and it had

slipped from second place to sixteenth. "Charlie's Angels" (students' 1979 first choice), "Battlestar Galactica," and "The Incredible Hulk" all had been cancelled. By 1982 the "Dukes of Hazard" was the program most frequently named as first choice as well as most frequently included in students' first four choices of popular programs. "Fall Guy" and "Knight Rider" were tied for second choice as favorite program, and Walt Disney programs were a close third. It should be noted that no one program was named as favorite by a majority of the students. Even "Dukes of Hazard" was named as a first-choice favorite by only 10 percent of the respondents, and choices were distributed among 73 programs. As a general category, "cartoons" was named somewhat more frequently (9.5 percent) than the "Dukes of Hazard" for first choice, and "movies" followed close behind "Dukes of Hazard" as third most frequently mentioned. However, when the multiple responses to the question are merged, without regard for their order of mention, "Dukes of Hazard" is clearly the most frequently named (18 percent) with "cartoons" (16 percent) and "movies" (14 percent) close behind.

The two top choices of Anglo children in California, who had been surveyed at about the same time, were the same as the 1979 choices of the Alaska sample (Eastman and Liss, 1980). However, Black children and Hispanics tended to prefer programs featuring like-ethnic characters, a choice that is not available to Alaskan Native children. Unfortunately, there is no comparable survey of like-age children with which to compare the 1982 sample.

The favorite program of parents of both sexes in 1979 was "Hee-Haw," followed by "movies" and "All in the Family." By 1982 the "soaps" had been added to program offerings and "All My Children" was

first choice among favorite programs with "Dallas" and the news following. When all mentions of favorite programs are merged, "Dallas" is first (31 percent) and "news" second (22 percent), followed by "All My Children," "Little House on the Prairie," "Dynasty," and "sports." "Little House on the Prairie" is the only program which was among the top five favorites in both years. Program choices generally were not related to educational level although only the better educated among the Southeastern parents named as favorites programs such as "Sixty Minutes."

For the 1982 interview, parents were given a checklist of programs on the state channel in addition to being asked which programs were their favorites. For each program they were asked to check whether they watched it "always," or "sometimes," or "never." Although the list of programs in Table 7 is similar to the list of favorite programs, it is not identical. Noteworthy is the inclusion of "Alaska's People" which is "always" or "sometimes" watched by 95 percent of those interviewed. This is consistent with the frequently expressed desire of rural residents for more programs about Alaskans and about events relevant to their lives.

In 1982 the news was most frequently chosen by students as the least liked program, followed by uncensored movies, "Mash," "Aviation Weather," "scary" shows, and sports. The "uncensored movies" response came almost exclusively from the Southeast area where "R" rated movies were shown on the recently acquired cable system. "Spooky, scary" shows, followed by news and sports had been the least-liked shows chosen in 1979. The differences in ranking of frightening programs

for the two years may be due to the desensitization accompanying prolonged exposure to "scary" programs.

Table 7
Percentage of Adults Watching State
Channel Programs

	Always	Sometimes	Never
State News	59%	41	0
60 Minutes	57	34	9
Alaska's People	55	40	6
Nat'l News	54	45	1
Dallas	54	35	10
Walt Disney	50	41	8
Little House	45	44	11
Real People	49	39	13
Dynasty	42	38	20
Jeffersons	41	47	13

When students were asked why they disliked the shows they had named, younger children were more likely to say "scary" while older children more often said "boring." Girls were more likely to dislike programs because they were "scary" or "violent" than were boys. Students in the two smallest villages were less likely to say programs were "boring" than were those in the larger, less isolated villages. There were no significant differences in reasons cited for disliking programs associated with exposure to the world outside the village or with the length of exposure to television.

Parents' opinions on the worst shows on television were heavily influenced by what was available in the two areas. Forty-three

percent of Southeastern parents interviewed said that uncensored movies were the worst thing on television. Parents in the Northwest apparently disliked the same type of program. Although they had not been exposed to more extreme examples, such as the "R"-rated movies shown in Southeast, 22 percent of them said "sex shows" were the worst programs. Violent shows were named as "worst" by 14 percent of the parents, particularly those who were better educated. As was the case with their children, the only specific program named by parents as most disliked was "Mash." All but one of the 13 percent of parents who named "Mash" were from the Northwest. Apparently the sophisticated humor and social comment of "Mash" crosses neither the age nor the culture gap.

Parental control. Both parents and children in 1982 were asked a series of questions about who controlled the use of the television set. Not only were there differences between parents' and children's reports, but differences between the traditional child-rearing practices of the two culture areas seem to be reflected in parents' responses (see discussion of traditional culture under Site description, p. 14). In response to the question, "Who decides what children watch on TV?" the majority of the Inupiat parents stated that the children decide. In contrast, the majority of the Tlingit and Haida parents stated that parents decide.

In response to a parallel question, 41 percent of the Inupiat students said they themselves decided and 29 percent said their parents decided. In contrast, only 20 percent of the Tlingit and Haida children said they themselves decided and half said their parents decided. Parents' education was also related to their

response in a different direction in each area: the more education, the more Inupiat parental control and the less Tlingit and Haida control, although the relationship between the two areas remained the same. Students also were asked if they could watch any program they wanted to watch: almost three-fourths of the Inupiat said, "yes," but only about one-third of the Tlingit and Haida said, "yes." The students' sex also influenced their response: 65 percent of the boys said, "yes," but only 51 percent of the girls.

Students and parents were asked how late children were allowed to watch TV. As can be seen in Table 8, culture as well as differences between children's and parents' perceptions affected the responses. The majority of parents and of children in both areas agreed that parents sometimes "make you turn the TV off or change the channel." There were no differences in reasons given associated with length of exposure to television, or with age or sex of child. However, the better-educated parents in both areas were more likely to give "program not appropriate" as a reason. Almost all the children, and the majority of the parents, said parents watched TV with children always or sometimes. About a third of the children said their parents talked with them about television, while over 80 percent of the parents in both areas said they talked with their children about television at least some of the time. The majority of the children who said their parents talked with them reported it was to explain things they saw on television.

Reactions to television. Parents were asked whether there was anything they would like to see changed about TV; if so, who would they ask; if they asked would it do any good; and who chooses the

Table 8

Children's and Their Parents' Reports on How Late They Were Allowed to Stay Up to Watch Television

Culture Area	Until 9	9 until midnight	After midnight	Any-time
Inupiat (NW)				
Children's response	10%	60%	24%	6%
Parents' response	39%	54%	2%	5%
Tlingit/Haida (SE)				
Children's response	37%	48%	7%	7%
Parents' response	33%	65%	2%	-

programs on the state television channel. The majority of parents would like to see changes in television, particularly those who had had television longer. Thirty-nine percent of the viewers in the Northwest and almost half of the viewers in Southeast said they didn't know who to ask about making changes. Twice the percentage of Northwest as Southeast parents correctly identified who to ask. A much larger percentage of Northwest than Southeast parents felt it would have an effect if they asked for change although a majority in both areas answered affirmatively. When specifically asked, "Who chooses the programs which are broadcast?," only 24 percent in each area correctly named the RATNET committee or their representative on it. Neither educational level nor the length of time they had had television influenced their response.

In both 1979 and 1982 adults were asked, "Do you think that (each of the following) is a problem?": (1) the number of commercials on TV, (2) the amount of violence on TV, (3) the amount of sex or bad

language, (4) the quality of children's programs, and (5) the fact that there are few programs about Alaska or Alaskans. The 1979 and 1982 responses by area are presented in Table 9.

In the Northwest, education had no effect on responses to commercials, although in the Southeast the better educated were more likely to see commercials as a problem. The better educated in both areas were more likely to see sex or bad language on television as a problem, but education had no effect on responses to the balance of the "problem" questions.

In both years parents were also asked if they found (or expected to find) television (1) enjoyable or disappointing, (2) interesting or uninteresting, (3) exciting or dull, (4) bad or good, and (5) a powerful or weak influence. As was the case in 1979, the majority of respondents in both areas saw television as enjoyable, interesting, and exciting. The majority in 1979 also saw television as bad, an opinion which had reversed by 1982 when 92 percent of the Inupiat parents and 68 percent of the Tlingit and Haida parents saw television as good. In 1979 twice the percentage of no-television as television village respondents viewed the medium as a powerful influence; by 1982 a little over 60 percent in both areas saw it as powerful.

The final question assessing reactions to television in 1982 was, "Do you think the news programs report things the way they actually happen?" Ninety percent of the Inupiat parents and eighty-three percent of the Tlingit and Haida felt that they did. The better-educated parents in the Southeast had less faith in the news, although

Table 9

The Percentage of Parents in Each Area

Who Feel There is a Problem with Selected Aspects of TV

Problem:	1982 Northwest	1982 Southeast	1979 TV NW	1979 TV SE	1979 No TV NW	1979 No TV SE
1. Commercials?	50%	61%	50%	22%	33%	44%
2. Violence?	45%	70%	40%	17%	28%	63%
3. Sex or bad language?	52%	79%	50%	22%	40%	38%
4. Children's programs?	19%	38%	27%	20%	0%	14%
5. Alaskans?	49%	58%	83%	22%	33%	30%

education did not seem to affect responses in the Northwest. The length of exposure to television had no effect.

Two of the 1979 items assessing television's effect on adults' awareness of news outside their local area were repeated in 1982. The first asked (a) What is the latest big news story you have heard about, and (b) Where did you learn about it? Responses were coded as being of local, national or national/international significance. In 1979, about one-third of the no-television versus over half of the television respondents cited a story of national or national/international significance. For the people without television, radio was the source for 77 percent. By 1982 a higher percentage of the sample as a whole cited stories of national or national/international significance but the percentages differed sharply by area: 92 percent of

the Southeast parents and only 48 percent of the parents in the Northwest. Twenty-one percent of the Northwest parents responded "don't know." Ninety percent of the respondents in both areas obtained their information from television.

Respondents for both years were also asked to name any countries in the world where there was fighting or war during the previous year. In 1979 there was no difference between television and no-television people in correctly naming countries, but no-television respondents, incorrectly, named countries where there had been no fighting nearly twice as frequently. By 1982 about the same percentage responded correctly (and incorrectly) regardless of length of exposure to television, area, or education.

Television effects

On movies. What happens to existing media when television comes to the village? As has been noted in many other settings, the medium most similar to television, movies, suffers most. Before television every Alaskan village showed movies at least once a week, and in some villages, every night. Movies served purposes other than entertainment, for example, as a means of raising money for school or community needs. In several villages, exclusion from the movies was a prime means used by the community to discipline village young people. Television replaced the entertainment function of movies but provided no substitute for the social functions movies had filled. The 1979 survey indicated that movies still attracted an audience, but it was a diminishing one. Fifty-nine percent of television village children, versus seventy-seven percent of non-television children, had seen a movie within the week. By 1982 movies had ceased to be shown on a

regular basis, and the question of when the child had seen his last movie was dropped from the interview because few children could remember when they had last seen a movie. Ninety-eight percent of the Inupiat parents interviewed in 1982 said they did not attend movies. Thirty-five percent of the Southeast parents, with their greater access to cities such as Juneau, reported they did attend movies. However, even they said that their latest movie had been two or three months ago.

On print media. Previous research in other settings has reported both positive and negative effects of television on the use of print media (Madigan and Peterson, 1974; Corteen, 1977; Hornick, 1978). In both 1979 and 1982, students were asked (1) when they had last read a book that was not part of their schoolwork, and then (2) to name the book. There was little difference between television and no-television children in 1979 or between children with different lengths of exposure to television in 1982 in response to the first part of the question. However, there was a clear difference between groups in ability to name the book they had read. In 1979, 91 percent of the no-television children could name the book while only 74 percent of the television village children could. By 1982, when all villages had television, the percentage of the like-age total sample who could name the book read had dropped to 70. In the longitudinal sample the percentage who could name the book dropped from 88 in 1979 to 67 in 1982, although in neither year had there been a negative relationship between age and the ability to name the book read. Further, when the 1982 responses were divided into "High-TV" (TV prior to 1979) and "Low-TV" (TV since 1979), the "High-TV" villages had changed little

from 1979 to 1982 and the "Low-TV" subjects were responsible for most of the drop--suggesting that television has an impact on book reading with the first two years of exposure and that that impact is maintained.

In addition, the length of time since a book had been read had increased. In 1979, 78 percent of the respondents in the longitudinal sample had read their book within the last week or less. By 1982 this percentage had dropped to 65. The decline was greater for males (from 89 percent to 59 percent) than for females (from 86 percent to 75 percent). In view of the social desirability of claiming to have read a book, particularly when being interviewed in a school setting, responses to the request to name the book read probably provide a more accurate estimate of television's effect on recreational reading than would a question on whether a book had been read. Television appeared to have no effect in 1979 or 1982 on parents' responses to the interview questions on when they had read a book and whether they could name the book read.

There was no indication in 1979 that television had had an effect on the reading of magazines and newspapers by students or their parents. However, the percentage of students who reported that they read newspapers or magazines in 1982 is clearly higher than it had been three years earlier (66 percent versus 45 percent in 1979). Results from the longitudinal sample also indicate that reading of magazines is up, although some of this is due to age. In 1979, 31 percent said they read neither magazines nor newspapers. In 1982 only 13 percent of these same students said they did not.

Responses to the question of which magazine was read were classified as follows: national news - Time, Newsweek; national specialty - Teen, Sports, Coed, Off Road, etc.; national general - Life, People; Humor - Mad, comics; Alaska Magazine; and catalogs. The increase in magazine reading is attributable to greatly increased reading of national magazines such as Teen, Sports, Off Road, and People, not to reading of news magazines. News magazines continue to be read by 5 to 10 percent of the students, and exposure to television does not seem to have affected that figure.

As would be expected, older students are more likely than younger to read magazines and newspapers and more likely to read national magazines rather than comics. Although there is no consistent effect of length of exposure to television which overrides the influence of size or ethnicity of a village, within each pair of villages students in the village which has been exposed to television longer are clearly more likely to read national specialty magazines--34 percent in High-TV versus 18 percent in Low-TV villages.

Although television seemed to have no effect on magazine reading among adults, there were differences between adults in patterns of magazine use in the two culture areas. Eighty-one percent of Southeast parents reported reading magazines as opposed to forty-five percent of the Inupiat parents in the Northwest area. The difference between areas is primarily attributable to the group of parents in the Northwest who had had less than an eighth-grade education, few of whom reported reading magazines. Southeast parents reported reading news magazines, specialty magazines, and general magazines, in that order.

Northwest parents named specialty magazines most often, followed by news magazines and Alaska Magazine.

Patterns of newspaper reading were affected by differences in availability of newspapers between the two areas as well as differences in interest. Virtually every Southeastern parent interviewed read an Alaskan city newspaper such as the Juneau Empire, most on a daily basis. In the Northwest only 17 percent read an Alaskan city newspaper while 72 percent read a Native newspaper such as the Tundra Times. The majority in the Northwest read newspapers on a weekly basis. Neither length of exposure to television nor educational level appeared to affect newspaper reading.

On radio. Radio has played a major role as a source of information, communication, and entertainment in Alaska as well as in the Canadian North. Prior to the introduction of satellite-telephone links associated with the advent of television, radio was the major link with the outside world for most of the communities in our study. In the Northwest it provides entertainment, regional and national news, and an on-going message service which has served to build a regional identity for scattered villages. In those areas where the Native language remains viable, radio broadcasts are in both English and the local Native language.

As indicated by responses to the 1979 interviews, television had an early effect on the use of radio by both children and adults. Adult respondents in villages without television reported having the radio on longer, with 67 percent of them reporting that the radio was on 10 or more hours per day versus 37 percent reporting the same average in the television villages. Ninety-five percent of the

children in non-television villages versus eighty-six percent in the television villages reported listening to the radio. By 1982, only 53 percent of the children reported listening to the radio, with more younger than older children listening. Many more students in the Northwest than in the Southeast listened (64 percent and 37 percent, respectively). This is approximately the same ratio between areas as in 1979. As was the case in 1979, music programs were clearly preferred, 58 percent of the students listened to music programs while only 16 percent listened to the next most frequently mentioned choice, messages. Those who lived in the Southeast and those who had spent more time outside the village were more likely to prefer music programs. In the longitudinal sample, radio listening had declined (from 93 percent of the respondents in 1979 to 46 percent in 1982). The percentage of those listeners who reported they liked to listen to music programs has risen from 45 percent of the longitudinal sample to 76 percent.

The desire to acquire. Parents (86 percent) and children (87 percent) agreed that children saw advertised items they wanted on television; however, there was a trend toward less desire for these items with longer exposure to television, greater exposure to the outside world, and with age. There were no differences associated with area or sex in the percentage of students who desired commercial items. However, there were some minor differences in specific items desired. In the Northwest the most frequently desired items in order of frequency named were: (1) Car, (2) Games or Toys, (3) Bike, and tied for 4th place were Clothes and Motorcycles. In the Southeast the most desired items were: (1) Car, (2) Games and Toys, (3)

Clothes, and (4) Atari or computer. As might be expected, it was the males who wanted cars and motorcycles and females who wanted clothes. A complete list of items named may be found in Appendix C under Children's Interview responses.

When parents were asked if they saw items on television they would like to have, about 60 percent of the parents in each area said they did. As with the children, the longer a village had had television, the lower the percentage of respondents who reported wanting things they saw. The amount of education viewers had did not affect their desire for things seen. However, adults in the two areas had a very different list of desired items, differences which reflect the differences in apparent acculturation as well as differences in the physical settings of the villages. Inupiat adults wanted furniture, cars, food items, and running water in that order. The Tlingit and Haida parents in the Southeast wanted household or kitchen gadgets, records or tapes, and wanted to travel to places seen on television. Cars were a poor fourth choice named by only two Southeast respondents.

The desire to emigrate. One of the concerns that Native parents in both Alaska and the Canadian Arctic have expressed is that exposure to television would influence their children to emigrate to more urban areas (Forbes and Lonner, 1980; Granzberg, 1979). A limited body of research is available which documents various aspects of television's impact on traditional societies in the Arctic and other parts of the world. However, with one exception, researchers have not examined the potential influence of television on the desire to emigrate which was the concern of Native parents. Schramm et al. (1982), in his study of

the introduction of television to Samoa, ascribes Samoa's increasing rate of emigration to population and economic pressures. Rogers (1976), in his studies of villagers in Columbia, saw emigration to urban settings as a cause of modernization, along with television, and did not examine the relationship between them. In studies of the influence of television on the peoples of the Arctic, only Coldevin (1975) has treated exposure to television as a possible factor in the desire to migrate.

Two hypotheses regarding television's possible influence upon the desire to emigrate are available. One, epitomized by the Native parents' view, reflects folk wisdom that you "can't keep them down on the farm" after they have seen the big city, even on a small screen. The other is based on research which indicates that television causes its regular viewers to believe the world a more dangerous and untrustworthy place than it actually is (Gerbner and Gross, 1976). Given that the majority of television programs are presented in urban settings, it is reasonable to hypothesize that rural television viewers might come to believe urban areas so dangerous they should avoid them. It was with these two viewpoints in mind that the question, "If you could live any place you wanted to when you are through with school, including (home village), where would you live?" was posed.

Children's responses to the interview question on where they would like to live as adults were rank ordered as follows:

1 = The home village

2 = Any other Native village in area

3 = A regional center for an area (e.g., Kotzebue or Nome for the Inupiat)

4 = Any Alaskan city

5 = Any town or city in "lower 48" (e.g., Seattle), or Hawaii

Overall, only 36 percent of the children interviewed wanted to live in their own village or the surrounding area when they were adults. However, within the sample there is considerable variance associated with village and culture area of origin. In the two smaller, more remote, Eskimo villages a higher percentage (57 percent) of the children prefer their home area. In the two larger Inupiat villages and the Tlingit and Haida villages roughly 30 percent prefer their home area. As would be expected by their geographical location, approximately half of the Tlingit and Haida children would choose a city outside of Alaska, usually Seattle, while only about 15 percent of the Inupiat children from the larger villages would make a similar choice.

It is not a new phenomenon for Native children in rural villages to express the desire to live elsewhere. Berreman (1962), in his discussion of a village in the Aleutians, claimed that "...in 1952 every child over nine years of age planned to emigrate from the community as soon as possible" (p. 106). However, the desire to live outside their home area, expressed by most of the children interviewed, is in distinct contrast to the desires and expectations expressed by their parents, and vividly illustrates the generation gap in Native Alaska.

A regression analysis was used to examine the relationships between the rank order scores of desire to emigrate and the length of exposure to television, the size of the child's home village, and the culture area. That is, the rank order was regressed onto these three predictors. Size of the village contributed significantly (b=.80), roughly the difference between choosing Kotzebue instead of the home village. Culture area had about one-half that effect (b=.43). Thus, area and size can cumulatively predict the rank of the child's response, contributing 1.23. Television, however, did not have a significant effect either alone or in combination with the other predictors. When television, area, the television by area interaction, and the television by village size interaction are all partialed out, the regression coefficient for size alone is .995, essentially a full rank.

A separate regression analysis was used to examine the relationship between desire to emigrate and the individual child's exposure to the majority culture, based on the time he or she had visited or lived outside the home village. Exposure contributed a small but significant amount (b=.23), to the rank score. Within culture area, differences in age also contributed to rank of response. With age, Inupiat were significantly less likely to choose a location away from the home village while Tlingit and Haida became more likely to choose a distant location.

The mean scale scores are in the expected direction with larger villages, children who had spent more time outside the village, and Tlingits and Haidas having the higher score, i.e., desiring to live the greater distance from home. These figures suggest that television

is not as powerful an influence as first-hand experience, derived from the cultural and demographic characteristics of one's home community and from travel, at least in regard to choice of a place to live.

Coldevin (1975), in his investigation of the effects of the introduction of satellite television to Frobisher Bay, asked his interviewees a question similar to the one in our study. Frobisher Bay is a Canadian Arctic community of about 2,500 people, 60 percent Inuit and 40 percent Euro-Canadian. At the time of his study the community had had television for about two and one-half years. Coldevin compared three groups of male students at the regional high school in Frobisher Bay: Euro-Canadian students, Inuit students who were residents of Frobisher Bay, and Inuit boarding students who had come in from the more remote settlements which had no television. In response to the question, "If you had a choice, where would you prefer to work, in a Settlement in the North or somewhere down South?," 99 percent of the Euro-Canadian students, 47 percent of the Frobisher Bay Inuit, and only 26 percent of the Inuit students from the Settlements stated a preference for working "somewhere down South." Coldevin ascribed the difference between the Frobisher Bay and the Settlement Inuit to the difference in the time they had been exposed to television. Our analysis suggests that the difference in Frobisher Bay residence time between the two groups (the equivalent of our "exposure" measure) might explain the difference in their responses without reference to television.

In examining the influence of other variables on children's choice of a place to live upon becoming adult, a significant sex by culture area interaction effect was found, although sex of respondent

did not make a significant difference in the sample as a whole. As can be seen in Figure 1, Eskimo females are significantly more likely to choose a distant and urban location than are Eskimo males. The effect is consistent across the age range interviewed. On the other hand, there is no significant difference between Tlingit and Haida males and females.

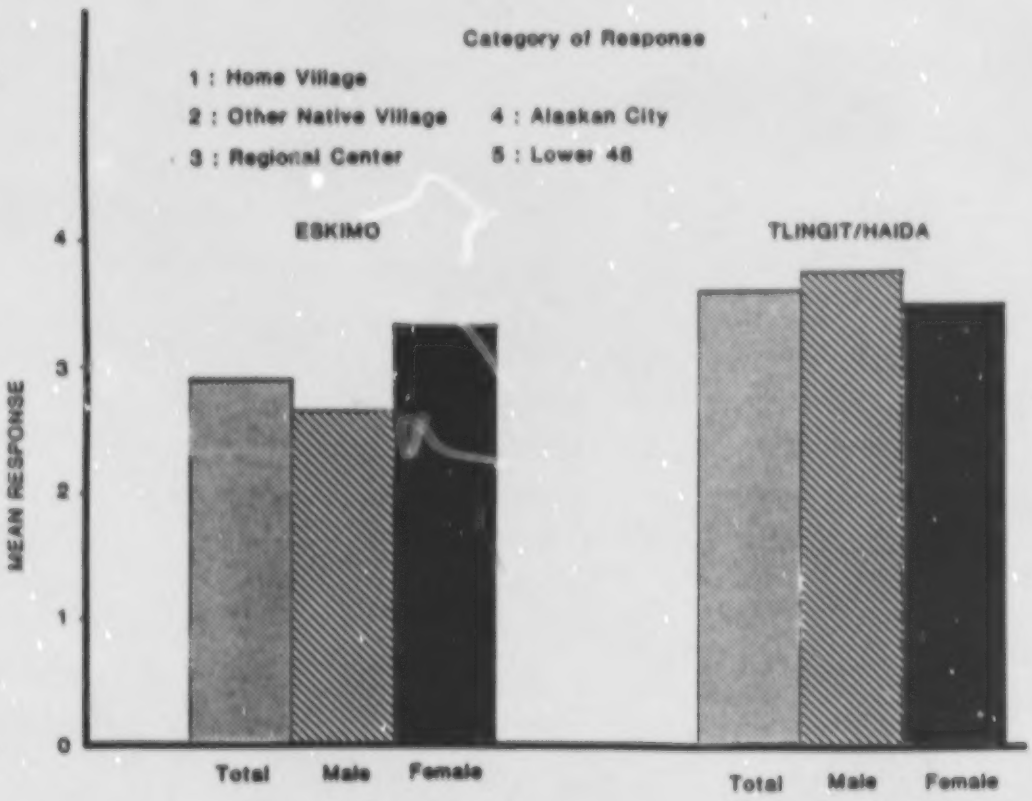

Figure 1. Where Students Want to Live as Adults

The sex differences in reported desire to emigrate are consistent with existing patterns of emigration, educational achievement, and occupational choice among adults in northern Alaska, reinforcing our view that factors other than such recent introductions as television are involved (Madigan and Peterson, 1974; Olsen et al., 1972; Kleinfeld, Travis and Hubbard, 1982). Differential out-migration based on sex, from northern Eskimo villages, has been well documented. In reference to an Eskimo community, Madigan and Peterson comment that there are

> push and pull factors that affect young women more than young men. One factor is that the urban environment seems to be more benign for women than men in terms of both educational and occupational opportunities. Coupled with this is the fact that villages where the dominant economy is based on hunting and fishing tend to have more male-related occupations than female, and therefore the push factors are not as great on men as women (p. 12).

In contrast, within the majority culture, males and females are equally mobile (Shumaker and Stokols, 1982).

In her discussion of the different paths of Inupiat men and women in the wage economy, Kleinfeld (1981) points out that in spite of cultural differences and geographical isolation, Inupiat women participated in the labor force almost as much as did women nationally, which is not at all the case for Inupiat men. The difference in educational achievement as well is illustrated by the fact that from 1976 to 1980 over three times as many Native women as men received degrees from the University of Alaska (Kleinfeld, Travis and Hubbard, 1982). The difference between Inupiat males and females in desire to emigrate is essentially the same across the age range from seven to twenty, which suggests that the information sources and models which

influence those attitudes are widely available in the village. In addition to those factors listed by Madigan and Peterson, the predominance of women in such village wage-labor jobs as teacher's aide, school cook or secretary, and office worker in the village corporations may contribute to female students' confidence in their ability to function successfully in an urban setting.

Interpersonal interaction patterns. A version of the "most important person" question used by Coldevin (1975) in his study of television in the Canadian North was used with both children and adults in both years of interviewing. Beginning with the question, "Who is the most important person you can think of?," interviewees were then asked about the most important person "in the village," "in the state," and finally, as in Coldevin's question, "Who is the most important person in the world." Responses were divided into four categories representing increasing distance from self: (1) ego, including self, parents, other family members and personal friends; (2) local, including local village officials, school staff, or local priest or minister; (3) state, including governor and state senators, and (4) national, including the president of the United States, and other national or international figures. A small percentage of responses fell in a fifth category, religious, which includes such responses as "Jesus."

The initial hypothesis was that exposure to television would influence responses to move along the continuum away from ego toward national. The relationship between responses and predictors, such as area and age, was examined by cross-tabulation of frequencies and by comparing means from an ordinal scale based on distance from ego. The

initial analyses of both children's and adults' responses in 1979 showed that the mean distance from ego was not significantly related to the presence or absence of television. However, when the cross-tabulations were examined, it was found that television village children and adults showed a pattern of reduced local responses accompanied by an increase in both ego-related and national responses. The explanation proposed was that the presence of television increases intrafamily attraction by, for example, bringing them in close contact for significant daily periods--at the same time weakening the community ties so characteristic of small communities and traditional cultures.

In both years there was the expected relationship with age, with older children and adults giving fewer ego-related responses and more appropriate responses to the cues in each successive question. Boys gave fewer ego-related and more appropriate responses than girls. There was no appreciable difference between areas for either year for children or adults on the initial question, but children in Southeast tended to give more appropriate responses to succeeding questions than children in the Northwest.

The student longitudinal sample was expected to show the trend away from ego-related responses since they were now three years older. However, 93 percent of those who chose ego in 1979 continue to do so three years later, and although 7 percent of those who earlier chose ego have moved toward national, 14 percent of those who had previously named local or national now name ego. There were no differences in category of response by children or adults associated with length of exposure to television, suggesting that television's impact on

interpersonal interaction occurs during the initial year or two of exposure. This is supported by comparisons between 1979 and 1982 for those villages which had television longer and those which had television for a shorter period of time. The "High-TV" villages showed little change from 1979 to 1982 while the "Low-TV" villages which had acquired television since 1979, showed the greater shift toward ego.

Perceptions of reality. An aspect of children's comprehension of what they view on television which has been shown to be related to television's effects is the degree of realism ascribed to what is viewed. Children are more likely to imitate observed aggressive acts which they believe are "real."

In the 1979 interview students were asked what programs they like because they have real people in them or because they are about things that really happened, a question adapted from the Rankin Inlet study (Watson, 1977). Answers were categorized as to whether the programs named were (1) actual programs such as news or sports events, (2) fictionalized specials about real people and events such as "Roots" or "Backstairs at the White House," and (3) fictional or fantasy such as "Charlie's Angels" or "All in the Family." About 30 percent of all interviewed children named programs which were in fact "real." Age, exposure to the majority culture, and culture each affected the degree to which children were able to distinguish reality from fantasy in the programs (Forbes and Lonner, 1980a).

In 1982, concern about children's understanding of the word "real" prompted a different approach to assessing children's perception of reality on television. A series of questions similar to

those used by Fernie (1980) was included in 1982 interviews in order to operationally define what "real" meant to respondents. The reality interview questions and responses are shown in Table 10. The set of questions was asked twice--once using a more "realistic" program such as "Hill Street Blues" (program #1) and characters from that program (Renko, Lt. Furillo), and once using a less realistic program such as "Dukes of Hazard" (program #2) with the characters "Boy" and "Daisy." We assumed we would find children more able to distinguish reality from fantasy as they grew older, and that the more acculturated Tlingit and Haida would be better able to make the distinction than the more isolated Inupiat. As can be seen in Table 10, the relationship is not that simple.

The age relationship is consistently as predicted. The ability to distinguish between fantasy and reality has a more complex relationship with degree of acculturation and with length of exposure to television. Acculturation and longer exposure to television seem to be associated with improved ability to understand that the characters in television programs are portrayed by actors and are not "real" in the sense of people in the news or in documentaries (questions 2 through 6). However, the responses to question 1 suggest that increased exposure to television and to the majority culture increase the belief that television portrays social reality, i.e., that life-as-it-is in the world outside the village is portrayed (by actors) in fantasy programs.

Table 10

Reality Questions: Percent of Responses

1. Do you think program is about real people and things that really happen? Yes.

	Area		Sex		Age Group			TV Exposure	
	NW	SE	M	F	1	2	3	More	Less
Program 1	41%	70	56	53	65	45	44	60	46
Program 2	35	57	52	36	62	29	62	50	38

2. Do you think _____ is character's real name? No.

	Area		Sex		Age Group			TV Exposure	
	NW	SE	M	F	1	2	3	More	Less
Program 1	85	86	87	84	75	93	93	89	82
Program 2	76	73	76	74	62	84	84	80	69

3. Could character come to this village and talk to us? Yes.

	Area		Sex		Age Group			TV Exposure	
	NW	SE	M	F	1	2	3	More	Less
Program 1	40	46	39	45	28	47	56	42	41
Program 2	38	44	33	46	26	46	53	43	35

4. Does character ever get sick or feel sad? Yes.

	Area		Sex		Age Group			TV Exposure	
	NW	SE	M	F	1	2	3	More	Less
Program 1	84	89	83	88	80	90	87	89	81
Program 2	73	88	72	81	71	78	84	78	75

5. What does character do when the television program is over? Reality-based answer.

	Area		Sex		Age Group			TV Exposure	
	NW	SE	M	F	1	2	3	More	Less
Program 1	69	73	70	69	65	68	78	71	67
Program 2	60	78	65	62	57	62	76	67	58

6. Would character be different at home than he is on TV? Yes.

	Area		Sex		Age Group			TV Exposure	
	NW	SE	M	F	1	2	3	More	Less
Program 1	86	88	86	87	78	88	98	90	82
Program 2	82	91	78	89	76	87	92	89	78

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The degree of "reality" of the program ("Hill Street Blues" versus "Dukes of Hazard") serves to mediate perceptions. Viewers do see the less realistic program as less realistic (question 1), but they seem to have a harder time sorting out the specific realistic aspects addressed by questions 2 through 6, as indicated by the smaller percentage of respondents who give the more reality-based responses. Generally, there are increasingly appropriate responses to question 1 with age, program #2, and less exposure to television. On the other hand, there are more appropriate responses to questions 2 through 6 with age, program #1, and more television exposure. There is little consistent effect associated with sex or area. Results from an additional group of reality questions are reported under Attitudinal in the Sociocultural measures.

Sociocultural measures

Socialization theory has been a major influence in research on television's effects (Wackman, Wartilla, and Ward, 1977). A number of researchers have described television as a socializer for the nation's children, on a par with or perhaps more influential than family, school, and peers (Huston-Stein, 1977; Gerbner, 1976; Liefer, Gordon and Graves, 1974).

This socialization--or more properly, when referring to Alaska Native children, acculturation--perspective has guided the selection of sociocultural measures. Socialization has been defined as the process by which children learn "...the general patterns of their culture--i.e., what one must or must not believe or do..." (Hunter and Whitten, 1976, p. 143). Included in these learned belief systems are

ascriptions of personality dispositions to others. Therefore, a major section of our measures explored children's concepts of others as well as of themselves through use of the semantic differential, a sex-role measure, and a measure designed for this study, the Which-Pich. An attitudinal questionnaire and portions of the semantic differential assessed their view of the world in general as friendly or unfriendly, safe or dangerous, etc. The Rosenzweig Picture-Frustration Scale assessed fantasized aggression as well as perceptions of appropriate interpersonal interactions of other types. Some redundancy was built into the battery of sociocultural measures in order to aid in interpretation of results, and to guard against possible misinterpretations of content--always a potential problem in cross-cultural research. With the exception of the Sex-Roles measure, which was introduced in 1979, all sociocultural measures were administered in 1977, 1979, and 1982.

Osgood Semantic Differential

This widely recognized measure of attitude and connotative, or affective, meaning has been used extensively in cross-cultural studies (Osgood, May, and Miron, 1975). A series of paired adjectives (good/bad, rich/poor, etc.) are used to assess respondents' attitudes toward a variety of concepts. In this research the semantic differential has been used to assess attitudes toward three types of concepts: Self-and-Others (Self, Alaska Native People, White People, Black People); Life Styles (Anchorage, Village Life), and Nations (Russia, West Germany, Canada, Japan). Each concept was rated on a series of five-point scales anchored on each end by polar adjectives, e.g., good (=1)/bad (=5), the higher score representing the more

negative attitude. For the age group represented in our sample, a five-point rather than the usual seven-point scale separating the bipolar adjectives is recommended by Osgood.

Three scores were derived for each concept: (1) a score ranging from 1 to 5 for each adjective pair which usually is presented in a profile of ratings of each concept--as in Figure 2 (scale omits decimal point, i.e., 16 = 1.6); (2) the mean of all adjective pair scores for each concept indicating an overall positive or negative rating; and (3) Osgood's D score which provides information on the differences between ratings of any two concepts, e.g., Native People vs. White People.

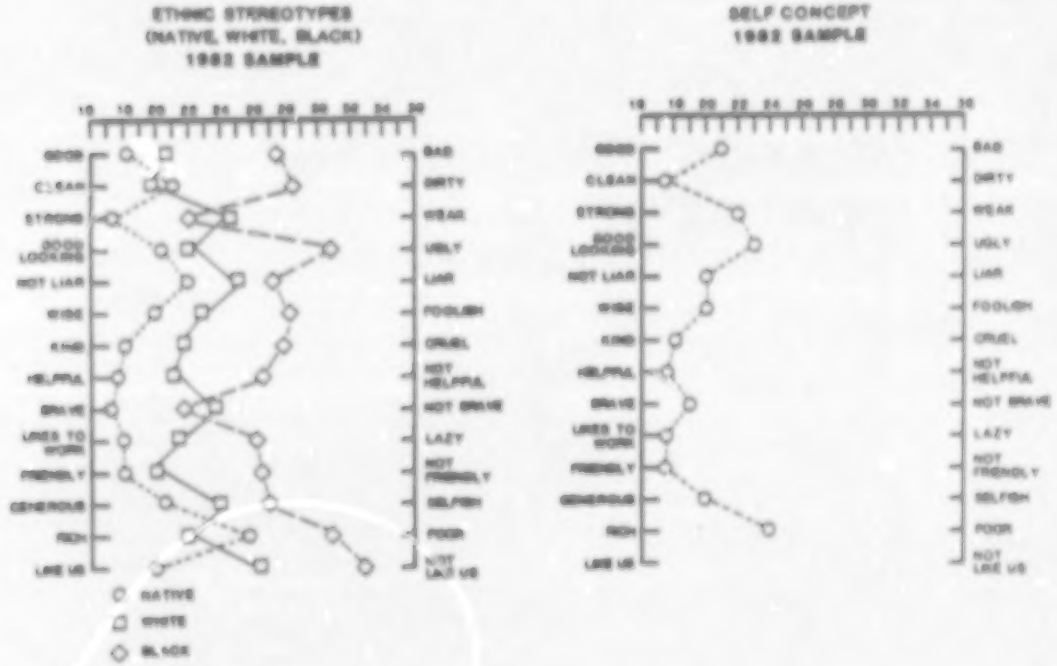

Figure 2. Osgood Semantic Differential

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The D score is a measure of relationship which takes in account both the mean discrepancies and the profile covariation between any two concepts (Osgood, Suci and Tannenbaum, 1957). For the Nation ratings, a fourth score was derived, D', which is the mean of the D scores from all paired concepts within the Nation group.

The mean concept score was used for the major analyses of both cross-sectional and longitudinal data. Overall the semantic differential had the highest test/retest reliability and internal reliability (unidimensionality) of all of the measures of that type in the test battery. The test/retest reliability over two years (1977-1979) exceeded that found by Dreyer (1970) over 18 months in the National Assessment of Indian Youth. The differences in unidimensionality between the scales for the three types of concepts assessed are discussed in conjunction with the results of each type.

Self-and-Others. The adjective pairs for Self-and-Others were: good/bad, dirty/clean, strong/weak, good looking/ugly, liar/not liar, wise/foolish, cruel/kind, helpful/not helpful, brave/not brave, likes to work/lazy, unfriendly/friendly, generous/selfish, poor/rich, and (for all but Self) like us/not like us. Twelve of the fourteen adjective pairs were taken from an earlier study in Southwestern Alaska Eskimo villages (Forbes, 1972). Those twelve had been selected, translated and back-translated by a group of Eskimo student teachers for whom Eskimo was the first language. Poor/rich and like us/not like us were added for this study.

Although television has been described as a socializer on par with family, school, and peers, the view that television is most likely to have an effect when other sources of information and primary

socializers are absent is becoming more widely accepted (Corder-Bolz and O'Bryant, 1978). On the basis of the latter view we hypothesized that television would not affect concepts of Self, Natives, or Whites because information on those was readily available in the village while face-to-face interaction with Blacks was either absent or much less frequent. As is the case with most groups of children throughout the world, in all three samples under discussion and in all three data collections the Native students in this study rated themselves and their own ethnic group the highest, Whites were next and the least familiar group, Blacks, last. The mean scores for each group in 1982 were as follows: Self = 1.99, Native = 1.90, Whites = 2.24, and Blacks = 2.75. The Self-and-others scales had the best psychometric characteristics of the three types of scales with internal consistency ranging from r_{kk}=.77 to r_{kk}=.88.

Self. The semantic differential technique has been used extensively in studies of self-esteem. Most relevant to this study is the use of the semantic differential in the National Study of American Indian Education which included Pacific Northwest Coast Indians and Eskimos (Dreyer, 1970). Powell (1982) reviewed an extensive literature suggesting that television has a detrimental effect on the self-esteem of minority children; however, the bulk of the literature concerns Black children, is based on content analyses of representations of minorities versus Whites in popular programming, and presents no evidence of actual effects on minority children. Comstock and Cobbey (1979) cite one study which found lower self-esteem among Black children who viewed more television, but no evidence for the directionality of the effect was presented. Although

television's potential negative effect on Black children is usually attributed to negative portrayals of Blacks combined with the disproportionate number of Whites in "hero" roles, that argument cannot be extended to television's effects on American Indian or Eskimo children as those minorities are generally not represented in popular programming.

Multiple regression analysis of the 1979 sample found no evidence of effects on self-esteem which might distinguish television from non-television village children. None of the individual predictor variables, subject variables, or TV variables reliably predicted Self, and the additional variance explained by television over subject variables was inconsequential.

However, analyses of the much larger 1982 sample do provide evidence of television's negative effect on self-esteem. Although television as a main effect contributed almost nothing to the variance explained, the interaction of television, age, and area was significant, and the difference between the variance explained by the subject variables and by television and its combination variables was also significant. The interaction effect indicates that older students in Southeast with a longer exposure to television will have higher, i.e., more negative, scores on Self. The argument for television's effects, in interaction with age and ethnicity, is strengthened by results from the multiple regression analysis of the longitudinal sample. Although none of the individual predictors are significant for the longitudinal sample, the R^2 increases substantially when Subject x TV factors are added to the prediction, indicating that information about television in interaction with other

variables is adding to our ability to predict students' scores, although, in this case, we cannot identify which specific interactions are the major contributors.

The absence of impact on Self scores in 1979, when half of the sites had television, may indicate that it takes more than two years of exposure to have an effect. The small size of the effect in 1982 also suggests this. However, an alternate explanation is that the small size of the sample in 1979 (161) may conceal effects, essentially arguing that our power to detect effects was too low. Whichever form the influence of television on self-esteem may take, the evidence indicates there is a negative effect, modified by the viewer's age and ethnicity, and the hypothesis of no effect on Self is not supported.

Native. Neither the 1979, the 1982, nor the covariance sample had a large enough increase in variance explained as the result of the addition of television or Subject x TV factors to reach significance. The covariance sample had the expected significant effect associated with 1979 scores, and the 1982 sample had one television interaction effect (TV x Area) which we have chosen to regard as spurious in view of the general lack of significance in the other comparisons. The analyses support the hypothesis of no television effect on the concept of one's own ethnic group for rural Native students.

Black. Two opposing views of the effect of television on the image of Blacks have been expressed in the popular press. The Reverend Jesse Jackson stated in a 1978 newspaper column that television projects Black people "...as less intelligent, more violent, and less hard-working than we are" (Jackson, 1978). However,

William Raspberry, a prominent Black syndicated columnist, sees television as the most "integrated" part of American life on the basis of the Black presence in television commercials (Raspberry, 1979). Research on the roles Blacks played on television in the 1970s suggests that their image has improved. "Although they are relegated to more minor roles and are in less prestigious occupations, Blacks are portrayed as equally industrious, competent, and physically attractive as Whites. Blacks are more moral and kind, whereas Whites are more dominant in relationships" (Greenburg and Atkin, 1982, pp. 216-217). Coincidentally, the mini-series "Roots" was viewed in our television village sites between 1977, the pre-television baseline data collection, and 1979, when half the sites had television and half did not. The effects of television on Native students' stereotype of Blacks is illustrated in Figure 3, television villages becoming more positive and non-television villages more negative.

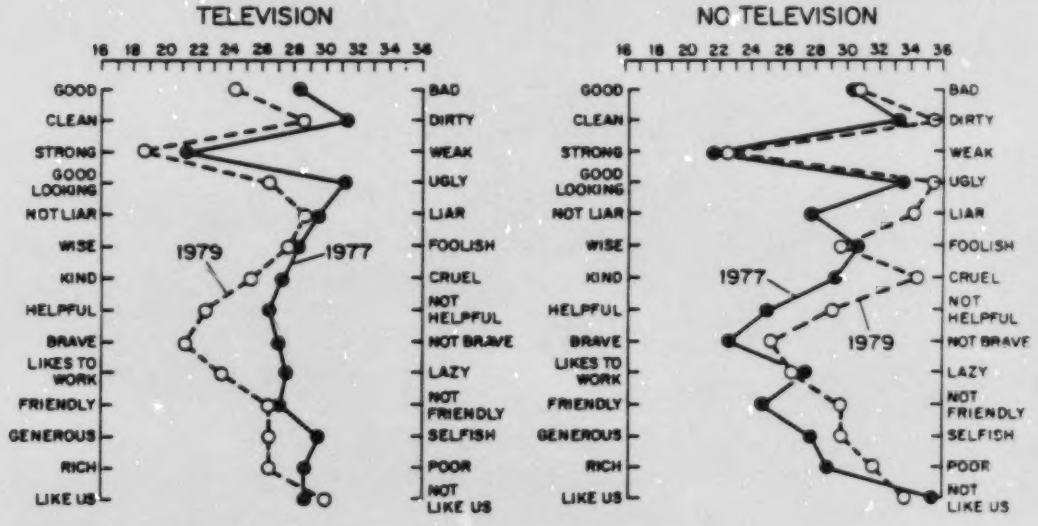

Figure 3. Test 1977/Retest 1979 Ratings of Black People Concept

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Figure 3 is taken from the 1980 report and the sample illustrated includes ethnic groups not considered in our current discussion. However, the regression analysis of the 1979 data for only Eskimo and Tlingit and Haida respondents also provides evidence for the effect. Television as a single factor is significant and the difference in variance explained when television and its interactions are added is also significant. The only other significant variable is the subject variable interaction of sex, age, and area.

As interesting as this 1979 effect was, it left the question still open as to whether television in general had contributed to improving the image of Blacks or whether the improvement was primarily due to "Roots"--and whether the effect would be maintained.

Regression analysis of the 1982 data shows no significant incremental or individual predictor effects, indicating that scores for subjects with more exposure to television are not different from those with less exposure. However, the longitudinal analysis shows an effect of the addition of television variables and a significant television interaction effect, TV x Age. The interaction effect indicates that older students who have had longer exposure to television have more positive (lower) scores. This interaction suggests that the "Roots" effect is maintained for those students who saw the mini-series at an age when, according to Collins (1979), they could be expected to understand, at least in part, the message of the program. However, as illustrated by the means plotted in Figure 4, the positive effect is not maintained for the "more television" group as a whole, and the trend toward more negative stereotyping (higher scores) with age prevails.

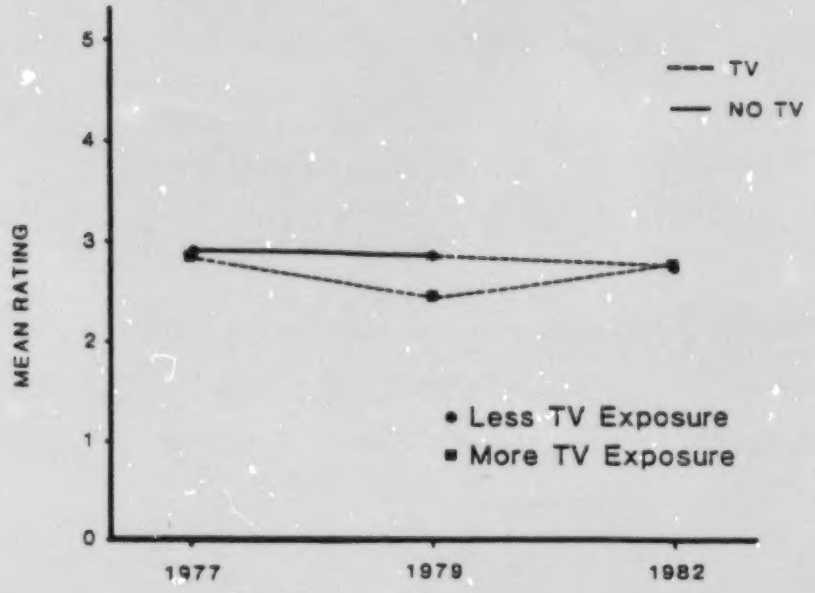

Figure 4. Change in Rating of Blacks With or Without Television

Whites. The regression analyses do not show significant increases in variance accounted for attributable to television in the 1979, the 1982, and the longitudinal samples. Interactions of sex and area and sex, age, and area are significant for the 1979 sample, while the 1982 and longitudinal samples show no significant effects. As was the case with the Native concept, the preserce of first-hand information of Whites in the village seems to be associated with a lack of television effects.

Life Styles. The adjective pairs for Anchorage and Village were exciting/dull, safe/dangerous, unfriendly/friendly, good/bad, easy/difficult, hate to live there/like to live there, small place/big place, fast/slow, representing a mixture of evaluative and activity adjectives. The concepts and their scales were, of course, selected

in 1977 before the Tlingit and Haida were added to the study. Anchorage is not the same referent for people in the Southeast of Alaska that it is for the Inupiat of Northwest Alaska; Village probably has a different set of meanings for the two groups as well. Neither scale had as satisfactory psychometric characteristics as the Self-and-Others scale even when confined to a single culture area. When the Anchorage and Village scales are assessed on the basis of the combined sample of Tlingit and Haida and Eskimo, they do not show characteristics of a good rational scale, i.e., the scales are not adequately unidimensional, or of a good empirical scale, i.e., the scales are not adequately multidimensional, as evidenced by their low to moderate internal consistency (R_{kk}=.68). Therefore, results from the analyses of these scales should be viewed with caution. The hypothesis was that exposure to television would increase the attractions of Anchorage and decrease those of the village.

Anchorage. In none of the data collection years did the Anchorage scale show evidence of the effects of television, either on the full sample or the Northwest sample alone. In the 1979 sample, television and one of its interactions do reach significance, but since the increase in variance explained is not significant, the significance of the individual predictors is assumed to be a chance effect.

Village. Parallel analyses were performed on the sample with both Northwest and Southeast subjects, and on a sample of Northwest subjects only. Both analyses produced essentially the same results. In 1979 there was no indication of television effects, indicating no effect of the first two years of television. In the covariance sample

the total sample had two significant television interactions, TV x Age x Area and TV x Area, and the increase in variance attributable to television is significant for both the total sample and Northwest subjects alone. The three-way interaction indicates that older students in Southeast, who have had greater exposure to television, will have become more negative toward the village when the effect of their 1979 score is controlled. In terms of the actual means in the covariance sample, older subjects as a whole are more positive in their view of the village, which is not surprising since this sample has a larger group of students who have not visited or lived outside their home area. For the total 1982 sample and for the Northwest the only single significant predictor is age, older students being more negative about the village than younger; the total sample mean for ages 7-10 is 2.07, for ages 11-13, 2.29, and for 14 and older, 2.29. For the Northwest the means, from younger to older, are 1.96, 2.29, and 2.69. The increase in variance attributable to television and its interactions also is significant for both the total sample and the Northwest. Although the evidence is consistent across samples, the relatively poor quality of the scale itself suggests that we should be cautious in attributing to television a negative effect on the concept of Village, at least until we look at evidence from other measures as well.

Nations. The adjectives for the Nations concepts were good/bad, poor/rich, peaceful/warlike, selfish/generous, strong/weak, can trust them/cannot trust them, not free/free, small/large, many people/few people, is like United States/is not like United States, friendly/unfriendly, and near United States/not near United States.

The individual nations are not satisfactory scales and were not intended for individual analysis. Canada is the only scale that has an acceptable level of internal reliability (.85), reflecting the students' general lack of knowledge about the other countries included in Nations and the resulting random error present in their ratings. The difference score, D', has much better psychometric characteristics as it is the mean of all the paired difference scores between all Nation concepts. The hypothesis was that as children learned more about foreign countries from television, they would be better able to distinguish between countries and the total difference score, D', would increase.

As reported in Forbes and Lonner (1980b) the analysis of variance of D' in 1979 indicated television had had an effect on the concepts in Nations. The 1982 multiple regression analyses of the 1979 data reaffirmed the effect with a highly significant main effect for television, several television interaction effects and a significant increase in R^2 difference. However, the longitudinal sample analyses did not show such effects. Although two of the television interactions were significant in the covariance sample, the R^2 difference was not. In 1982 there were no significant main effects, except age, and no significant television interaction effects.

Inspection of the means for the three samples (1979, 1982, and longitudinal) and the regression coefficients do not support the hypothesis that television is associated with an increase in the ability to discriminate between foreign countries. Although the mean for the television villages in 1979 is higher than that for the non-television villages (5.9 versus 5.6), the direction of the

relationship between television and no-or-less television groups in the longitudinal and 1982 samples is not consistent. Nor is it consistent for the relationships between the subgroups involved in the significant interactions in the three samples. Those villages which received television after 1979 did not show the same effect and it must be concluded that the differences between the television and no-television villages in 1979 pre-existed the introduction of that medium.

Sex Roles

Lambert's (1969) sex role imagery measure, as adapted by Williams et al. (1977), was administered to all participants in 1979 and 1982. Only three of the sub-scales in Williams' measure were suitable for use in rural Alaska and several occupations listed in the third sub-scale were changed to occupations more suitable for this setting. Subjects are required to respond to 36 items; twelve items concern personality traits or characteristics (e.g., "noisy" or "tough"), twelve items concern behaviors (e.g., "cries when hurt," "swears and uses dirty language"), and twelve items concern occupations or jobs (e.g., doctor or fishing). The three sub-scales are referred to as ACT, DO, and JOB, respectively, in the discussion to follow. The subject indicates whether each of the items is "true" or "false" for boys and for girls (separately) by responding to a seven-point scale. The score is the mean of the absolute difference between "boy" ratings and "girl" ratings on each item for each sub-scale. The higher score indicates a greater tendency to segregate the sexes socially and psychologically. Lambert (1969) defined his scale in terms of conceptually independent dimensions, i.e., the three sub-scales are

intended to measure substantially different dimensions of sex-role stereotyping. Lambert found that the DO scale and the JOB scale have the highest correlation: they have in common approximately 36 percent of their variance. When correlation matrices were constructed for each subgroup within his sample (e.g., by age, by SES, by rural vs. urban), the magnitude and pattern of the correlations did not depart from the values obtained for the sample as a whole.

In the Williams' study of the introduction of commercial television to a previously television-naive rural British Columbia community, Kimball (1977) found clear evidence of television's influence in increasing sex-role stereotyping over a two-year period. Our results also provide strong evidence of the increase in sex-role stereotyping attributable to television. However, the change in sex-role attitudes for the Native children in our sample did not appear to a measurable degree until after the first two years of exposure to television, which suggests that television has a more immediate impact on viewers who are like the characters portrayed on television in ethnicity and in culture. Nevertheless, even for culturally different children, television's influence eventually prevails.

The 1979 data provided no evidence of a television effect on sex-role stereotyping as measured by the ACT and DO scales. The ACT scale did show an "area" effect as well as three interaction effects, Sex x Age x Area, Sex x Area, and Age x Area. Students in the Southeast were more stereotyped than those in Northwest. Although both males and females in Southeast were more stereotyped than their Northwest counterparts, the difference between the areas was greater

for females. The age effect was curvilinear in both areas, that is, both younger (7-10) and older (14 and up) children are more stereotyped than the mid-age group, but the difference between the areas is the greatest in the oldest group because Southeast scores gain more between mid-age and older. Television, either singly or in interaction, did not contribute significantly to the variance.

The 1979 data on the JOB sub-scale showed two interaction effects involving television, TV x Sex, TV x Sex x Age, but neither television alone nor its interactions contributed significantly to the variance. Sex and age as main effects were both significant with a trend toward more stereotyped responses from older children and females.

The longitudinal or covariance sample showed no significant main effect, interaction effects, or difference in variances for the JOB and DO sub-scales. The ACT scale had significant main effects for Age, Television, and Sex, and a significant interaction effect for TV x Age. The difference in variance accounted for by the subject variables and the television variables is substantial (.151) but it does not reach significance, possibly because of the small number (90) of subjects in the sample.

By 1982 the impact of television on scores of all three sub-scales was evident. For the ACT sub-scale Age and television are both significant main effects and the increase in variance accounted for by the addition of television and its interactions also is significant. With the larger sample the age gradient is more linear in the direction of less stereotyping (age 1, 2.28; age 2, 2.03, and age 3, 1.55). Television, as before, increases stereotyping:

Children with less exposure to television had a mean of 1.68 while those with more exposure had a mean of 2.18.

For the DO scale both television and the interaction TV x Age are significant, and increase in variance attributable to television and its combinations is also significant. As in the ACT sub-scale, television contributes to sex stereotyping: The group with less exposure to television had a mean of 1.73 while the group with more exposure had a mean of 2.12. The significant interaction indicates that older students with more exposure to television have relatively lower stereotype scores, demonstrating the expected decrease in stereotyping with age, even within the more stereotyped group.

The JOB sub-scale also shows a main effect for television, two television interaction effects, and a significant difference in variance attributable to television and its interactions. Again, the mean is higher for the group with more television and older children have relatively lower scores than younger within the more exposed group. However, when the significant interaction of sex, age and television is considered, the older females within the more exposed group have relatively higher scores.

Williams et al. (1977) cite a number of studies which attest to the stereotyped picture presented by both programming and advertisements on television.

The Which-Pich

The Which-Pich is based on a similar measure used by Gerbner (1972) to test the influence of mass media. A set of photos is displayed to respondents. The set includes male and female young adults from four ethnic groups: Anglo-American, Black, Alaskan

Indian, and Eskimo. Respondents are asked to choose one of the eight pictures in response to the following questions:

1. All of these people have applied for the same job. Which one will get it?
2. Which one of these people would you invite to your home for dinner?
3. Which one of these people is smartest in school?
4. If your snow-machine (outboard motor) was broken, which one could fix it?
5. One of these people has a gun and might shoot at you. Which one has the gun?
6. If all of these men were in a fight, which one would win?

In 1977 and 1979 each of the questions included its opposite, i.e., Which one will get it?, Which one will never get it? The negative question seemed to tap another dimension, but not one diametrically opposed to the positive question. Therefore, the negative question was dropped since it added little information to the scale. The scale was intended to be multi-dimensional, to tap several dimensions of competence and power. A score labelled "Ethnic" was created by assigning a positive weight to each response to a positive item which selected an Alaskan Native. However, analysis of the scale created in this manner indicated that it was indeed multi-dimensional.

There were no shifts in response patterns between 1977 and 1979 associated with exposure to television. Although there are shifts in response on certain items from 1979 to 1982 for both the like-age and the longitudinal samples, they appear to be independent of exposure to television. The major shift in response is in item four, the snow-machine question: in 1979 the majority of respondents chose the photo of the White male; by 1982 the majority had shifted to choosing

the photo of either of the Alaskan Native males. As can be seen in Figure 5 there also was a shift toward choosing one of the Alaskan Native photos in response to the "home to dinner" question.

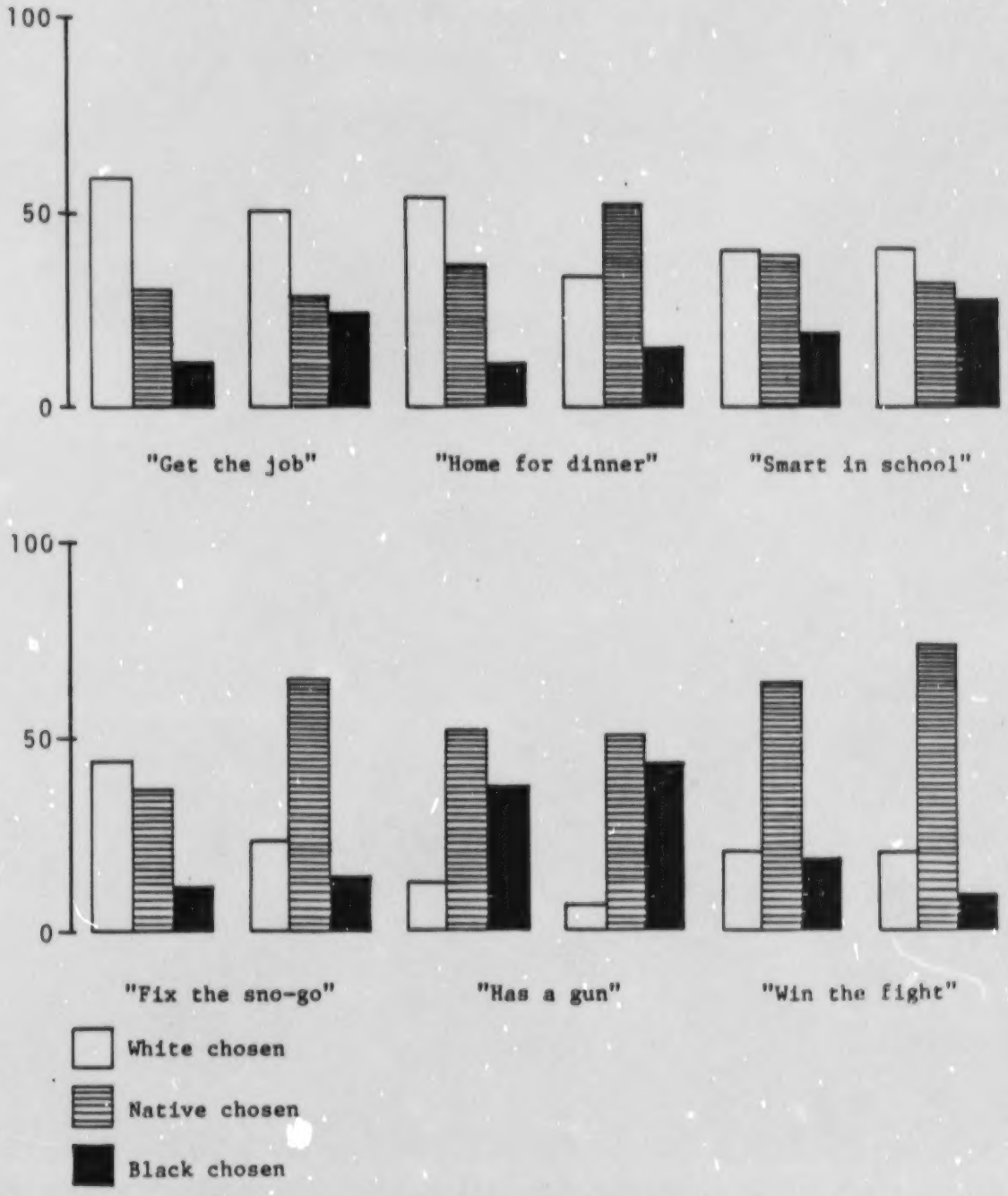

Figure 5. Percent of Responses to Which-Pich Questions for Each Ethnic Category

In all three data collections there were differences in response associated with subject characteristics. Females tend to choose females and males tend to choose males, regardless of the ethnicity of the pictured person chosen. This sex difference is particularly apparent among the Inupiat and less so among the Tlingit and Haida, although Tlingit and Haida girls were more likely to choose females in 1982 than they were in 1979. Responses from the Anglo-American logging camp sample in 1977 did not show this sex difference. Anglo-American girls chose the Anglo-American male in response to positive items.

In both 1979 and 1982 respondents from Southeast were more likely than those from Northwest to choose the Anglo-American photo in response to the "job," "dinner" and "snow-machine" items, but more likely to choose an Alaskan Native in response to the "gun" and "fight" items. Figure 5 shows the responses to each question by ethnic group for 1979 and 1982.

Attitudinal

A thirty-eight item questionnaire was group administered to students in grades five through eight and to retest subjects. Five items concerned educational and occupational aspirations, six were adaptations from Gerbner and Cross's (1976) "mean world" items, eleven were locus-of-control items taken from the scale used by Coleman in his 1966 study on equality of educational opportunity, and sixteen were television-related items added for the 1982 data collection. All but the sixteen had been administered to students in the same age range in 1977 and 1979.

Occupational aspirations. Students were asked, "What do you expect to do to make a living when you grow up?" and "If you could do anything you like, what would you like best to do for a living when you grow up?" In response to the first question a greater percentage of students in Southeast than in the Northwest named professional or technical occupations (17 percent versus 12 percent), but the difference was smaller than expected on the basis of the difference in their parents' education. The difference between the two areas in percentage naming professional or technical occupations was greater in response to the second question (23 percent Southeast, 14 percent Northwest).

The difference in professional and technical aspirations is greater between the sexes than between culture areas. Girls are more likely to aspire to professional and technical jobs than boys (21 percent versus 7 percent). Girls in both areas name professional and technical most often, clerical next, and public service third. In order of preference, boys in the Northwest choose skilled and semi-skilled jobs, public service jobs, subsistence and fishing, and professional and technical. Boys in Southeast choose fishing, public service jobs, professional and technical, and skilled and semi-skilled jobs. However, twice the percentage of boys in Southeast named professional in response to the "like to" question as they did to the "expect to" question while the boys in the Northwest made the same percentage of professional and technical responses to both questions.

The responses were spread over twenty-seven different job categories so the actual number of students choosing any one category is relatively small. This was particularly true because half the

students in the sample gave "unclassified" answers. Unclassified responses included "inappropriate," i.e., "get rich," "go to states;" "indeterminate," i.e., "have a job," "work;" and "descriptive," i.e., "high-paying job." This is approximately the same percentage of respondents who gave indeterminate responses in 1977 and 1979, and there is no difference between respondents with differing exposure to television. In contrast, the responses of only 4 percent of Anglo-American students in the logging camps included in the 1977 data collection were "unclassified." In the oldest age group (14 and above) there is an area difference in "unclassified" responses: over half of the Northwest students gave "unclassified" responses while less than a third of the Southeast students did so. However, there was little difference between the two areas in "unclassified" responses from the students under fourteen. The youngest group of respondents (7 to 10 years) were most likely to give "inappropriate" responses but there was no difference between the age groups in giving "indeterminate" responses.

An additional item in the Attitudinal questionnaire assessed students' belief that they might be discriminated against in the job market. The item presented a choice of two responses: (a) It's lack of skill and abilities that keeps many Alaskan Natives from getting a job. It's not just because they're Native. When an Alaskan Native is trained to do something, he is able to get a job, and (b) Many qualified Alaskan Natives can't get a good job. White people with the same skills wouldn't have any trouble. Although there were no differences in response associated with different exposure to

television, there were differences associated with sex and culture area and differences between 1979 and 1982 which can be seen in Figure 6. Although the percent of students who give the "prejudice" response (b) is clearly lower in 1982 than in 1979, students in Southeast and female students in Northwest continue to give the higher percentage of responses indicating feelings of discrimination.

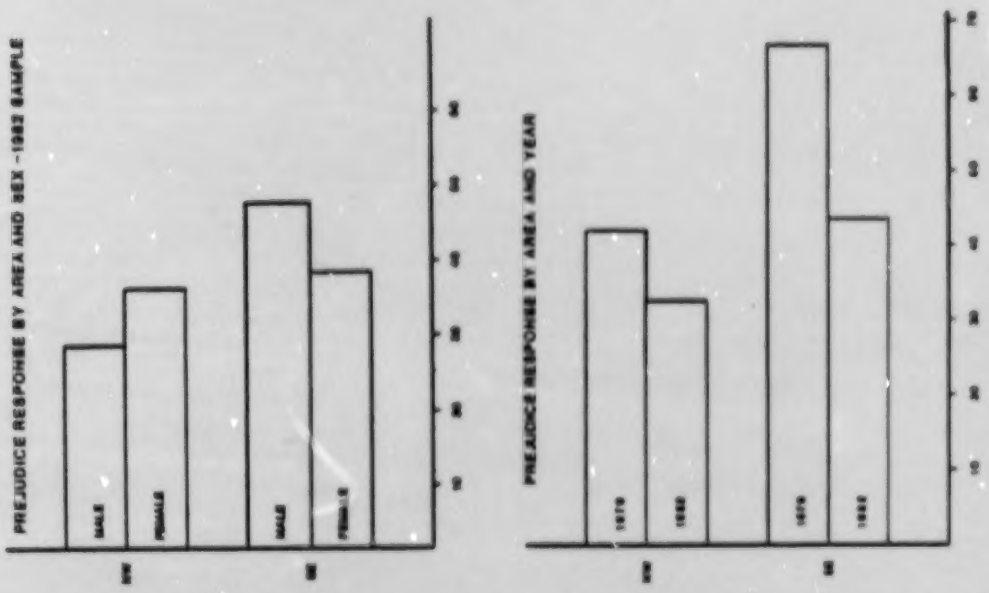

Figure 6. Percent of Responses Indicating Perceived Prejudice or Discrimination

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Academic Aspirations. Two questionnaire items assessed academic aspirations and interest:

How far do you want to go in school?

(1) I do not want to finish high school.

(2) I want to finish high school only.

(3) I want to go to technical, nursing, or business school after high school.

(4) Some college training, but less than 4 years.

(5) I want to graduate from a 4-year college.

(6) I want to do professional or graduate work after I finish college.

If something happened and you had to stop school now, how would you feel?

(1) Very happy—I'd like to quit.

(2) I wouldn't care one way or the other.

(3) I would be disappointed.

(4) I'd try hard to continue.

(5) I would do almost anything to stay in school.

Using the number of response categories for the "How far in school" item as an ordinal scale, mean responses for area, sex, age and television exposure were compared. Although only the age differences reached significance, there are consistent trends across both 1979 and 1982 and across the three samples. The average response of Southeast students is between "some college training" and "college graduation" in both 1979 and 1982. The average response for Northwest students is somewhat lower, from technical or other training to some college in both years. As was the case with occupational aspirations, girls have higher aspirations than boys: the girls' mean choice is

between some college training and college graduation, while boys' mean choice is about a third of a rank lower in both years. The significant response pattern for age for both years has mid-age (11 through 13) students with higher aspirations than either their younger or older peers. Perhaps older students express lower aspirations because they have more knowledge of financial and other difficulties which might keep them from attending college. There is no consistent effect associated with television.

Students' responses to the attitude toward the school item are generally positive: the average response is #4, "I'd try hard to continue." Again, television has no effect but there are consistent trends in both years and all three samples associated with sex and age. Girls are more positive toward school than boys, and older children are more positive than younger. Responses to both items have somewhat lower mean scores in 1982 than 1979, but the differences are small and probably associated with minor variations in sample selection between the two years.

World View. Six questionnaire items assessed students' perceptions of whether people could be trusted, would be willing to help you, and care about what happens to you. These items were adapted from Gerbner and Gross (1976) who, in a series of studies, have found that children who were heavy television watchers saw the world as a less friendly and trustworthy place. Each question was asked in reference to Anchorage and in reference to the village setting. Our hypothesis was that with exposure to television students would see Anchorage as a less safe and friendly place, and that with long term exposure that effect would generalize to the village. Items were:

--Some people say most people can be trusted. Other people say you can't be too careful in your dealings with people. How do you feel about it?

--Would you say that most people are more willing to help others, or more likely to look out for themselves?

--In the village (in Anchorage), no one really cares about what happens to you.

As in 1979, the majority of students in 1982 in both areas saw the village as the more trustworthy, more helpful, and more caring a place than Anchorage. There was no difference in responses for village or for Anchorage between students with longer than with shorter exposure to television. As was the case with the Osgood Semantic Differential concept of Anchorage, with age, responses became more negative. Results from the longitudinal sample illustrate this age-related trend. In response to the "Anchorage" version of the "trust" question, only 37 percent of the respondents in 1979 had said you "could trust"; three years later all 37 percent had changed their answers to "not trust." There was no comparable switch from "not trust" to "trust." The "help" and "care" questions showed the same age-related trend toward more negative responses for Anchorage but not for the village.

Locus of control. The eleven items on the locus of control scale were taken from Coleman's 1966 study on the equality of educational opportunity. Several of the available locus of control scales were pilot tested in 1977. Only the Coleman scale provided items whose syntax and vocabulary were suitable for use in the northern research sites. Locus of control scales assess the individual's perception of

the degree of control he or she exercises over one's life. A feeling that one is powerless to control events and that control resides elsewhere than in self is called external locus of control. Internal locus of control is the perception that one's own actions determine the direction of one's life.

The initial hypothesis was that exposure to the magnitude and complexity of the outside world as viewed through television would make Native student viewers feel less in control of their own fate. Coldevin and Wilson (1982) found that Inuit high school students who lived in a transitional town much like Kotzebue had more external locus of control scores than same-age boarding students who had come from the more remote settlements. They ascribed this difference to differential exposure to television. Culture area was not a significant predictor in the multiple regression analyses of the 1982 data when other related predictors are added to the analyses. However, when the two areas are compared in a one-way analysis of variance (as in Coldevin and Wilson) the students in Southeast who have had more interaction with the majority culture exclusive of television have more external scores than the more isolated Northwest students. Possibly other agents of acculturation than television may have an effect on one's sense of personal control.

In line with the comparisons of White childrens', Black childrens' and Native American childrens' locus of control scores as reported by Coleman in 1966, results for Natives in the 1977 sample, which included non-Native as well as Native children (Eskimo, Athabaskan, and Aleut), were significantly more external than for non-Native children. That is. Native children perceive themselves as

having less control over the world and its effect upon their lives. A small sample of Inupiat and Athabaskan students who had been tested in 1977 and retested in 1979 indicated television village children had become more external over the two-year period. These results were not confirmed by the analyses of the 1979 and 1982 samples. The hypothesis that Native childrens' locus of control scores will become more external with exposure to television was not supported.

Village versus TV life. The questions listed in Table 11 were intended to provide additional evidence on viewers' perceptions of the reality of television. The first question, "act just like," is analogous to the first of the interview reality questions ("is X program about real people and things that really happen"). As they did to the analogous question, Southeast students and those who had had longer exposure to television gave a higher percentage of "television" answers, that is, answers that impute more reality to television. The pattern of responses to the balance of the items which assess reality of television portrayals (questions 2, 3, 4 and 5) is in the same direction for those students with more exposure to television, but not for those from Southeast. Several of the differences are small, but the consistency of the pattern provides support for the hypothesis that longer exposure to television increases belief in the social reality of television. The responses to questions 5 and 6 also support that hypothesis: those who have had longer exposure to television are more likely to feel they have learned about the world from television.

Table 11

Responses to "Village life" versus "Television life" questions

		Area		Sex		Age Group			TV Exposure	
		NW	SE	M	F	1	2	3	More	Less
1.	People on TV act just like people in real life. (Agree)	45%	53	55	42	50	54	44	55	40
2.	The same things happen to people on TV that happen to people in real life. (Agree)	50	46	48	49	56	49	48	49	48
3.	Policemen on TV act just like policemen in real life. (Agree)	60	43	55	50	56	58	48	54	52
4.	Mothers on TV act just like mothers in real life. (Agree)	53	39	47	47	63	44	48	51	43
5.	Fathers on TV act just like fathers in real life. (Agree)	48	34	42	43	69	40	41	50	35
6.	Most of what I know about how to act in a big city like Anchorage or Seattle I have learned from TV. (Agree)	33	22	30	27	44	34	22	31	26
7.	Most of what I know about Black people I have learned from TV. (Agree)	34	28	34	30	50	29	32	36	27
8.	I have talked to Black people. (Never)	16	7	12	10	31	26	18	23	22
9.	The children in TV families help with the work around the home. (Frequently)	30	32	27	34	50	29	29	11	12

Table 11

		Area		Sex		Age Group			TV Exposure	
		NW	SE	M	F	1	2	3	More	Less
10.	The children in my village help with work around the home. (Frequently)	49%	36	42	46	37	37	50	46	41
11.	Older children in TV families take good care of their younger brothers and sisters. (Frequently)	45	37	42	43	44	42	42	40	45
12.	Older children in my village take good care of their younger brothers and sisters. (Frequently)	58	45	51	54	31	48	59	50	55
13.	The way men act on TV is O.K. for them but it is not the way men in my village act. (Agree)	78	72	73	78	67	68	83	73	79
14.	The way women act on TV is O.K. for them but it is not the way women in my village act. (Agree)	79	62	68	76	72	70	74	73	72
15.	The way teenagers on TV act is O.K. for them but it's not the way teenagers in my village act. (Agree)	68	60	64	66	73	58	69	71	57

Question 7 was included as a check on the investigator's informal observation that there were more Black people in contact with village children in 1982 than in 1977.

The balance of questions directly contrast television with the village. The majority of the students see the behavior of men, women, and teenagers on television as different from the behavior of like groups in the village. However, that has no necessary relation to their belief in the social reality of television as television does not portray village life, or even American Indians or Eskimos, on entertainment programs.

Rosenzweig Picture Frustration Test

The Rosenzweig PFT is a semi-projective measure designed to elicit the various modes of verbal aggression induced by frustration. Aggression, for the purposes of this measure, is viewed as essentially self-assertive and can be either constructive or destructive in its effect (Rosenzweig, 1976). The stimuli are twenty-four cartoon-like pictures, each of which portrays an everyday frustrating situation which involves two persons. Subjects are asked to fill in the response of the frustrated person pictured. An additional four pictures involving the same frustrations in a village setting were created for this study in 1977.

Rosenzweig's scoring scheme involves six categories, three under direction of aggression, and three under type of aggression, which combine for a total of nine categories. The three directions of aggression, extra-punitive, impunitive, and intropunitive, create the major categories of analysis. Of the three major categories, the extra-punitive was of greatest interest in this study.

The Picture Frustration Test has had extensive use cross-culturally, as well as within the United States, in the more than thirty years it has been available. Although the dress and hair styles in the line drawings are dated, and some of the situations pictured are foreign to rural Alaska, e.g., boys taking apples from an apple tree, the students had little difficulty understanding the intent of the measure and it was one of the more popular of our measures.

There were no significant sex differences in response within the population upon which the original norms were based (Rosenzweig et al., 1948). However, a later study (Rosenzweig, 1970) indicated clear sex differences in adolescent (tenth and twelfth grade) subjects, boys having higher "Extra-aggression" scores than girls. In the original norming group there is a significant drop in the extrapunitiveness with age over the sample range of 4 to 13 years, although the difference between adjacent age groups is not significant; e.g., the differences between the 8- and 9-year old group and the 10- and 11-year old group is not significant, but the difference between the 8- and 9-year old group and the 12- and 13-year old group is significant. With adolescence there is a further drop in scores (Rosenzweig, 1971).

Multiple regression analyses of all three major categories of response showed no effects of television, either singly or in interaction with subject characteristics, in any of the three samples. The hypothesis that viewing television would increase extrapunitive responses is not supported.

In 1979 the expected decrease in extrapunitive scores from 1977 to 1979 for the oldest group was found and it appeared to be

contingent upon the presence or absence of television. That is, the presence of television appeared to be preventing the normal drop in extrapunitive scores associated with adolescence. However, the size of the test/retest sample was very small. Neither the regression analysis for the longitudinal (1979-1982) sample nor the analysis for the 1982 sample reaffirmed the tentative findings of 1979. However, age is a significant predictor of an increase in intropunitive (assumption of blame by self) responses in both the 1979 and 1982 samples. Significant others in the child's home environment and the interpersonal behaviors they model undoubtedly play a much larger part in determining children's interactions, real or imagined, than an external force such as television.

Cognitive measures

Perceptual, spatial, and verbal measures

It is reasonable to assume that prolonged exposure to television will affect the viewer's cognitive abilities, which encompass perceptual, spatial, and verbal skills. Indeed a major review of television and human behavior, Comstock et al., (1978), and books by Salomon (1979) and Collins (1979) point out that a fertile research area concerns the interaction between the media and cognitive variables. And, as emphasized in the 1979 phase of this project (Forbes and Lonner, 1980b), in addition to reasons of general theoretical interest there is a particularly compelling practical reason to investigate interrelationships between television and cognition among Native Alaskan children. That reason concerns if and in which ways

television alters the cognitive and perceptual strengths of relatively unacculturated (or relatively television-naive) peoples in Alaska (and Northern Canada), about which so many researchers have written (for example, Berry, 1966, 1976; MacArthur, 1967, 1973, 1975; Kleinfeld, 1970, 1973; Guilmet, 1975). If television affects the cognitive abilities of Native Alaskan children, then educators and others concerned with their development may want to use this information to implement policy decision at the local or state level. Since television will likely not "go away," the better contributions of the medium may have to be balanced against its worst characteristics to affect necessary curricular and other changes.

That their ecology, socialization practices, and traditional subsistence patterns of low food accumulation "push" many of these people to high levels of perceptual and spatial skills is well known among researchers who have studied cognition across cultures (Berry and Dasen, 1974; Cole and Scribner, 1974; Triandis and Lonner, 1980). These and other texts and books of readings concerned with the interaction between culture and cognition consistently report and support the general finding that people from relatively remote Northern regions excel in the visual domain of cognitive processes, probably at the expense of the verbal domain of abilities (when judged against the background of a typical Western upbringing). For all people who have not been previously exposed to significant amounts of television, this medium at best serves a major educational and informational function; at worst it is a major disruption in their lives. In any case, television is a force to be reckoned with.

In the 1979 phase of this ongoing research, a battery of several "cognitive-type" tests were introduced into the research design. Four of these tests (see below for description) were retained for continued use in the project. Three of them measure problem-solving, spatial, or restructuring abilities, while the fourth is concerned with the measurement of verbal abilities. Each is constructed such that they can tap increasingly higher levels of these abilities.

The tests were chosen to help answer the major question of interest: To what extent does television affect the abilities and skills that these tests were designed to measure? A corollary to this question takes into account regional variations within Alaska. All Native Alaskan children cannot uniformly be characterized as highly spatially and perceptually skilled because of the ways their ecology helps to shape their characteristic modes of cognition and perception. Children in the Southeast, the Tlingit and Haida for example, benefit from a different set of ecocultural conditions. These conditions (for instance, larger and traditionally more sedentary settlement patterns, different socialization practices, and a different subsistence economy) lead one to hypothesize that their cognitive abilities are not identical to the abilities of those from the northern interior portion of the state; consequently, television may affect them differently. The research design, as explained in an earlier section of this report, takes into account these differing traditions, and therefore offers a different dimension to the overall strategy.

Thus, the overall research strategy assumes that there are good reasons to expect regional variations in skills and abilities among Native Alaskan children in the cognitive domain. Among the several

possible ways that television may affect such abilities are the following:

1. Television contributes to a decrease in the spatial and perceptual abilities of these children because it pulls them away from traditional exploratory behavior and makes them more passive. At the same time, television may increase their verbal abilities because it exposes them to a richer and more varied verbal diet.
2. Television contributes to an increase in the spatial and perceptual abilities of these children because it offers another dimension for them to exercise spatial and perceptual exploration and contributes to an educational function (Salomon, 1979). At the same time, verbal abilities may be decreased because the passive medium of television may result in less verbal interaction among peers and adults.
3. Television contributes to an increase, or decrease, in both spatial-perceptual and verbal abilities, for reasons specified above.
4. One of the above expectations may be true, but only for some children. That is, individual variations among children with respect to what each child individually brings with him or her to the video screen may contribute to complex interactions.
5. Television may contribute to some changes in the cognitive and perceptual variables of interest, but it may not be powerful enough to have an appreciable effect on them.

6. Television may affect these abilities, but the tests used for their assessment may not be sensitive enough to measure changes if and when they occur.
7. Television may affect these abilities, but usually as one of several co-existing acculturating factors. The mode of analysis chosen in research of this kind must therefore be capable of helping to assess television's direct effects.

Some background factors guiding test selection in this research will set the stage for the next section, which describes the tests. In his work on ecological and cultural influences on cognitive style, Berry (1976) used several of the tests we have employed. Berry selected the tests for the same reasons we did: all boast a rich history in the investigation of various influences on a host of cognitive variables among diverse cultural groups. Berry's work, which included the study of several groups of isolated and semi-isolated Canadian Eskimo villages, has documented, for example, that the "ecological demands" of the nomadic Eskimo (Inuit) fosters the development of a relatively high level of spatial and perceptual skills. This is characteristic of groups whose traditional subsistence economies are based upon low food accumulation, such as hunters and gatherers. Other Canadian researchers have supported this pattern, and researchers in Alaska have contributed to these findings.

However, with acculturational influences (that is, exposure to all of the vicissitudes of modern life), there typically is a slight decrease in such spatial-perceptual skills. At the same time one might expect a concomitant increase in verbal skills that are more consistent with exposure to acculturative influences, including formal

educational practices and exposure to mass media. But, as suggested above in the list of some possible ways television can influence cognitive abilities, the reverse is also plausible.

Many isolated groups native to North America's northernmost reaches share a constellation of other attributes, including personal autonomy, independence, personal reserve, and a high sense of separate identity--characteristics whose course of development are explained within the framework of Witkin's construct of psychological differentiation (see below, under the description of the CEFT). According to Berry's ecocultural model (Berry, 1976, 1979), the cognitive skills and cognitive style of groups undergoing acculturation (of which television is a major factor) will move in the direction of the dominant culture. But with these modifications one might expect "acculturative stress" as well (Berry and Annis, 1974), which perhaps further reduces the prior levels of cognitive strengths and readiness to be educated among the people experiencing acculturation.

The tests and rationale for their use in this research

The tests we selected are the Children's Embedded Figures Test, Kohs Blocks, Peabody Picture Vocabulary Test, and Raven's Standard Progressive Matrices. With the exception of the latter (which is essentially self-administering), these tests are individually administered by skilled examiners. Moreover, children invariably find them to be fun to take. This section gives a brief overview of each test.

Children's Embedded Figures Test (CEFT). The CEFT is a perceptual test. It was designed to be a downward extension of the more widely used Embedded Figures Test (which proved to be too

difficult for children), and is widely used to assess perceptual disembedding ability within the framework of Witkin's theory of psychological differentiation (Witkin et al., 1964, 1972; Witkin and Berry, 1975; Witkin and Goodenough, 1981). The subject's task on each of twenty-five trials (the test is untimed) is to locate a previously seen simple figure (cut-out models of two forms--a "tent" form and a "house" form) within a larger complex figure which has been so organized as to obscure or embed the sought-after simple figure. Therefore, as the Manual for the test (Witkin et al., 1971) states, "In the strictest interpretation, scores on the CEFT reflect extent of competence at perceptual disembedding." Individual differences in CEFT performance, however, appear to relate to more than differences in perceptual functioning. Numerous studies have shown that ability "to keep things separate in experience" in the CEFT, signifying greater differentiation in perceptual functioning, "manifests itself in congruent form in other areas of the person's psychological activity, signifying greater differentiation in these areas as well."

A child who achieves a high score (the Manual reports mean scores of 7.1, 10.6, 16.4 and 18.0 for ages 5-6, 7-8, 9-10, and 11-12, respectively) can be characterized as "field-independent," which is a chief construct under this general area of "cognitive style." Such a person more than likely has a high sense of self-non-self segregation; he or she may feel independent, self-reliant, and autonomous. Reliance on extraneous cues in the visual field, which may seriously affect his or her ability to find the appropriate embedded figure, is low.

While a separate paper associated with this project (Lonner, 1983) discusses the CEFT and the theory of psychological differentiation in more detail, it must be mentioned here that a host of factors can account for increases on CEFT scores for individuals and/or differences between groups. In addition to age changes (simple developmental increments), the variables of sex, ethnicity, social class differences, ability to follow instructions, differential effects of schooling, and general intelligence have sometimes been found to influence results.

The major current model used to explain differences and/or patterns in CEFT scores (and scores on other measures of differentiation) has been called the "ecological model" (Van Leeuwen, 1978; Berry, 1979). Within this model, the ecology, acculturative factors, adaptation to the dominant culture, and biological adaptations form an interactive network to explain patterns of results.

Kohs Blocks. The Kohs Blocks originated in 1923 with Stanley C. Kohs, a clinical psychologist (Kohs, 1923). The test was one of a large number of tests devised during the 1920's when mental testing first came into prominence. The Kohs Blocks themselves, or variations of them, became an important part of testing during that period. The test has frequently been cited as a measure of general intelligence (g). The Wechsler Scales (WISC; WAIS) use a nine-block version as a subtest in their performance scale (the Kohs contains sixteen blocks), as do the Arthur Point Scale, the Leiter International Performance Scale, and the Queensland Test (used widely in the Pacific Basin area). The task conceptually involves analyzing a design, selecting

block surfaces which match the components, and assembling them to create the total design. An individual's score is the number of designs completed correctly within a liberal time period. Bonuses for more rapid performance can also be given. Empirically it loads consistently on the same factor as tests of perceptual differentiation (like the CEFT). But as mentioned above it also consistently loads on a factor which can be called "general intelligence," and it predictably correlates positively and significantly with various measures of intelligence, verbal as well as non-verbal (although correlations with non-verbal measures are consistently higher). As Witkin and Goodenough (1981, p. 61) note, "If intelligence is defined in terms of general cognitive abilities, the restructuring dimension may be considered the expression of field independence in intellectual functioning."

It is clear that Kohs Blocks and tests of psychological differentiation measure a similar factor or factors; correlation among these measures are nearly always high and positive. Cronbach (1970), who was concerned about this, asserts that

> a large fraction of individual differences is accounted for by fluid ability. That is not to say that the Witkin tests have no independent information. The difficulty is that studies have not isolated and validated the significance of the independent contribution of the less-conventional kind of test (such as CEFT or EFT). (Emphasis added.)

In a later source, Cronbach (1972, p. 422) reiterated his concern: "Embedded Figures correlates so strongly with Block Design and Matrices as to suggest to me that what Witkin calls 'field differentiation' is nothing but g, and he offers no evidence to dispel this criticism." And in Berry's (1976) data covering numerous samples in various cultural settings, correlations between Kohs and EFT were

very high, reaching .95 at the group level with a total N of 793. Criticisms notwithstanding, the Kohs Blocks remain among the most respected tests to assess aspects of a person's spatial or restructuring abilities.

Raven Standard Progressive Matrices (RSPM). The Raven Matrices are available in three levels--Colored (for children), Standard (for the general population, including children), and Advanced (to tap higher levels). Developed in Great Britain as a measure of Spearman's (1923) general intelligence factor (g), the various Raven tests require the examinee to solve problems involving abstract figures and designs by indicating which of several figures belongs in a given matrix. The examinee chooses the missing insert from six or eight given alternatives. In the Standard form (which was used in this project), the items are grouped into five series, each containing twelve matrices of increasing difficulty but similar in principle. A score of 60 is thus maximum for this untimed test, which can be administered individually or in groups.

Correlations with both verbal and performance tests of intelligence usually range between .40 and .75, with no clear trend showing it to correlate higher with performance tests (despite requiring no words for administration) than with verbal tests.

Several factor analytic studies suggest that the Raven is heavily loaded with a general factor common to most intelligence tests (generally called "g"), but that spatial aptitude, inductive reasoning, perceptual accuracy, and other factors are involved as well. Roth (1978), however, questions along with others whether the test is really "nonverbal." Roth (p. 2) argues that the extent of

vocalization about the "nonverbal" problems is largely contingent upon the communicative context, and not just on the test materials themselves. But he adds that "the general hypothesis that communication is instrumental for solving 'nonverbal' problems does not imply that communication will assure success. Instead, it implies that success in solving such problems is at least partially contingent upon circumstances which hinder or enhance the use of communicative language as a means of solving the problems." Earlier, Irvine (1969, p. 5) voiced similar doubts that the test taps only a non-verbal dimension.

Despite such constructive criticism, the Raven has often been employed in cross-cultural research, especially in Africa (Irvine, 1969; Wober, 1975). Berry (1976) has used it extensively in his research, principally because it provides an excellent point of comparison for any cross-cultural investigation. Raven (1983) outlined recent developments, including much-needed work on more current norms. Finally, MacArthur (1973) refers to the Raven as a test of one's ability to infer from non-verbal stimuli, and suggests that it is intermediate in content between verbal-inferential tasks and disembedding and spatial-type tasks (for example, Kohs and CEFT).

Peabody Picture Vocabulary Test (PPVT). The PPVT is one of several tests designed to provide an estimate of verbal intelligence through measuring the subject's "hearing vocabulary," or receptive knowledge of vocabulary. The test has also been described as measuring language ability, semantic comprehension, vocabulary ability, receptive language, recognition vocabulary, verbal intelligence, vocabulary usage, single-word hearing vocabulary,

single-word receptive vocabulary, and intelligence. The common thread in these descriptions is that vocabulary, and language to some extent, is involved. One factor in its selection for use in this project is the fact that Madigan and Peterson (1974), successfully used it in a small Alaska-based television study.

The test was designed in the late 1950's, followed by a manual (Dunn, 1965) which guided its use until quite recently, when the test was revised (Dunn and Dunn, 1981). The earlier PPVT (the one used in the project, of course) contains 150 plates, with each plate containing four pictures. As each plate is presented, the examiner provides a stimulus word orally; the child responds by pointing to or in some other way designating the picture on the plate that best illustrates the meaning of the stimulus word. One's score is simply the total number of pictures that are associated with the correct word.

As explained in the manual (Dunn, 1965), content validity was built into the test when a complete search was made of Webster's New Collegiate Dictionary for all words whose meaning could be depicted by a picture. The restriction was the omission of words which could not be illustrated. The manual further states that a "good cross-section was obtained of words in common use today (emphasis added) in the United States." A detailed scoring system is available to convert the raw scores into various derived scores, but mainly an intelligence quotient. However, the issue of "tested intelligence" was circumvented by using the PPVT in this project as a measure of verbal acculturation. It has been reported (Sattler, 1982, p. 271) that a common finding is that PPVT scores for "disadvantaged" ethnic minority

children are lower than scores on individual IQ tests. This has been explained by the fact that common individually-administered tests of intelligence, such as the Wechsler Intelligence test for children, or WISC, require the examiner to interact personally with the examiner throughout such tests. The dangers of using PPVT "IQ" as a valid indicator of disadvantaged children's cognitive abilities thus appear to be considerable.

The pattern of "congruent" (comparison with other vocabulary and intelligence tests) validity coefficients reported in the Manual show that the PPVT correlates somewhat highly with WISC-Full Scale and WISC-Verbal (median r's of .61 and .67, respectively), and much lower with the WISC Performance subtests (median = .39). This is unsurprising on two counts: (1) the PPVT was designed to measure vocabulary facility, and (2) the WISC and other intelligence tests used as reference markers in such validation are loaded with verbal-education factors.

Studies of the intellectual abilities of Indian children generally indicate that because their visual-spatial abilities are much better developed than their verbal skills, they obtain higher scores on performance tests than on verbal tests. This is especially true when English is a second language, a fact which motivated Mawhinney (1983) to use the basic PPVT format in developing the Cree Picture Vocabulary Test for use among the James Bay Cree in Canada. Krywaniuk and Das (1976) say that this pattern of achievement may be a reflection of a visual style of learning and limited familiarity with English. An hypothesis indirectly suggested by Sattler (1982) is that the degree of discrepancy between verbal and performance abilities

also may be an indication of the degree of acculturation that has taken place. This also reinforces our motives to use the PPVT simply as a measure of the extent to which television may be contributing to an increasing acculturation to (or familiarization with) the English language.

Analysis of the data

Table 12 gives an overview of the number of children in each of the three data sets, by test. The means and standard deviations for each test and for each of the data sets are included as well. Reference can be made to these basic descriptive statistics when, later in this report, mean scores are presented for the subcategories of the overall Ns. The roughly equivalent test score means between 1979 and 1982 are expected; the minor differences can likely be attributed to random error (as could be expressed as the standard error of measurement for each test) or minor errors in drawing representative samples. The much larger means for each test when the test/retest children (last row in Table 12) are considered, are of course, largely explainable by the fact that in 1982 these children were more than three years older than they were when first tested in 1979. However, at issue with these particular data is whether maturation alone accounts for these changes, as opposed to maturation plus another factor (or factors) contributing to the gains in scores. Our central concern is whether television can be pinpointed as one of the factors contributing to these gains in test performance.

Table 12

Overview of Ns, Means, and Standard Deviations for the Three Data Sets by the Four Tests

	TESTS			
DATA SETS	RAVEN	PPVT	KOHS	CEFT
1979 (Total N = 192)				
N	118 113	45 113		
X	25.46	70.54	36.64	13.43
SD	10.18	11.75	23.95	5.17
1982 (Total N = 365)				
N	222 220	123		
X	26.66	73.15	41.37	
SD	9.81	12.26	33.02	
1979-82 (Total N = 137)				
N	74 76	29 37		
X	32.19	82.14	73.61	14.05
SD	7.16	9.79	38.05	5.94

Reference can also be made to Tables 13, 14, and 15, which contain correlational data among the tests. Tables 13 and 14 contain correlation coefficients for the 1979 and 1982 samples, respectively, while Table 15 contains test/retest correlations (the main diagonal) as well as correlations between the tests for different test-by-test samples of children tested in 1979 and 1982.

In Tables 13 and 14, it is clear that the Raven, PPVT, and Kohs form a battery of tests which measure something in common. Perhaps this is the "g" factor which has consistently been found to permeate these tests. It is also clear that the CEFT is tapping a different ability, one that in these samples is not highly related to "g" (or the common feature in the other three); however, the lower correla-

Table 13

Intercorrelations Among the Four Cognitive Tests for the Entire 1979 Sample[a]

Tests	PPVT	Kohs	CEFT
Raven	.91	.85	.26
	(254)	(185)	(147)
PPVT		.82	.22
		(184)	(147)
Kohs			27
			(137)

Note: Ns in Parentheses

[a] All correlations significant at p .01

Table 14

Intercorrelations Among the Four Cognitive Tests for the Entire 1982 Sample

Tests	PPVT	Kohs	CEFT
Raven	.60*	.65*	.22
	(185)	(94)	(23)
PPVT		.61*	.26
		(119)	(9)
Kohs			ID

Note: Ns in Parentheses

* p .01

ID = Insufficient Data

Table 15

Test-Retest Correlations Between Those Who Took the Tests in 1979 and 1982

	1979 Administration			
Tests	Raven	PPVT	Kohs	CEFT
Raven	.56*	.42*	.30*	.41*
	(100)	(96)	(54)	(69)
PPVT	.46*	.39*	.38*	.24*
	(88)	(84)	(38)	(47)
Kohs	.38*	.15	.74*	.69*
	(30)	(29)	(30)	(29)
CEFT	.32*	.34*	.19	.34
	(37)	(37)	(35)	(37)

Note: Ns in Parentheses * = p .05

The main diagonal data concern all those who took each test in both 1979 and 1982. Data below the diagonal concern those children who took a specific test in 1982 and also in 1979 (e.g., 88 children who took the PPVT in 1979 also took the Raven in 1982). Data above the diagonal concern those children who took a specific test in 1979 and also in 1982 (e.g., 54 children who took the Kohs in 1979 also took the Raven in 1982). * = p .05

tions between CEFT and the other measures are very likely affected by the CEFT's low ceiling for these samples of children.

A third factor to be pointed out is that the Raven and PPVT, because of larger sample sizes, are more useful in interpreting interactions, and are quite reliable measures.

As previously mentioned, the main mode of analysis was multiple regression. Since all the variables (and their interactions), for each test and for each data set, combine and create a multiple correlation (R), R^2 is the amount of test score variance that can be explained by each of the steps. An F ratio indicates whether all the variables in each set (each set's own R^2) combine to account for a significant proportion of the variance. F ratios are also provided for each variable, as well as their interaction with other variables in the set. Thus, within each set of variables one can determine the significance of independent contributions to R^2 as well as the set's overall ability to account for the test variances.

When another single variable (or set of variables) is added (thereby creating a different R), R^2 for this set can then be contrasted with the previous R^2. The formula used in this contrast indicates whether the change in variance accounted for between sets is statistically significant.

Table 16 presents the squared multiple correlations of the various sets of predictor variables for each of the tests and for the three data sets. For instance, subject variables (age, sex, village size, area) and their interactions account for nearly 27 percent (R^2 = .268) of the variance. The third column of Table 15 for the Raven in 1979 (R^2 = .420) indicates that all of the subject variables plus the variable of television and its interactions with the subject variables accounts for 42 percent of the variance. The text which follows discusses how one can estimate how much variance television can explain, both by itself and in interaction with subject variables.

last column in Table 16 concerns the amount of variance that all the variables except age can account for.

Table 16

Squared Multiple Correlations of Sets of Predictor Variables with Cognitive Measures for Three Data Sets

Tests/ Data Sets	Subject Variables	Subject Variables Plus Television	Subject Variables plus Television and its Interactions	All Variables Except Age
RSPM				
1979	.26890	.28844	.42013	.10952
1982	.38645	.38736	.42909	.05780
1979-82	.36901	.36917	.57439	.37796
PPVT				
1979	.49257	.50094	.58998	.18679
1982	.55284	.55599	.57813	.14407
1979-82	.39865	.41006	.54059	.42119
Kohs				
1979	.22016	.24478	.33036	.23237
1982	.34472	.34886	.46715	.08549
1979-82	.68271	.69097	.75925	.70039
CEFT				
1979	.18693	.18695	.23795	.07095
1982	.22642	.28631	.36336	.22865
1979-82	.39337	.48097	.58299	.38441

In the case of Raven in 1979, the R^2 of .109 (11 percent) means that age (that is, older children did better than younger children) accounts for 30 percent of the test score variance associated with Raven in 1979.

Table 17 entries are the proportions of variance explained by each set of variables. The multiple correlations and R^2s are not shown in this table. With reference to Table 16, however, for the Raven (as one example), the subject variables (set 1) yielded an R^2 = .269. The subject variables plus television yielded R^2 = .288. The entry of .02 (.288 minus .269) at the top of the first column in Table 17 is the proportion of added variance (2 percent) in Raven scores that is explained by the television variable. In other words, knowing only the degree of a child's exposure to television increases by 2 percent our ability to account for his or her performance on the Raven relative to other children in the 1979 phase of the study. This contribution by television is not statistically significant at conventional levels, but is larger than most of the other television effects shown in the first column of Table 17. Each of the non-zero table entries is a difference between two R^2s (presented in Table 16) and indicates the proportion of variance in test scores which that set of variables accounts for. As can be seen, simple effects of TV are statistically significant for only CEFT (longitudinal).

The second column of Table 17 was obtained by adding the interactions of television with the subject variables and television. The value of .13 is the difference between the R^2s for the subject variables plus television and its interactions (.42013) and for the subject variables plus the single variable of television (.28844).

That is, .42013 minus .28844 = .13169. This indicates that for 192 children who took the Raven in 1979, television and its interactions with the subject variables accounts for 13 percent of the added variance. Similar effects can be seen for PPVT and Kohs.

Table 17

Proportion of Variance in Scores on the Four Tests and Three Data Sets Explained by Four Categories of Predictor Variables

Tests/Data Sets	Television	Television's Interactions	Television + Interactions	Age and Interactions
Raven Matrices				
1979	.02	.13*	.15*	.31**
1982	-	-	-	.37**
1979-82	-	.21**	.21**	.38**
PVVT				
1979	-	-	-	.40**
1982	-	-	-	.43**
1979-82	-	.13*	.14*	.31**
KOHS BLOCKS				
1979	-	-	-	-
1982	-	.12*	.12*	.38**
1979-1982	-	-	-	-
CEFT				
1979	-	-	-	.17*
1982	-	-	-	-
1979-1982	.08*	-	-	.20*

Note: * = p .05; ** = p .01

The best predictor of Raven scores is age and its interactions with other predictors expressed as 31 percent (p .001) in the last column of Table 17. This simply means that older children in the 1979 sample unsurprisingly achieved higher scores, on the average, than younger children; this age increase occurs regardless of where the children are from, or how large their village is, or what sex they are.

Note that the explanation of the 1979-1982 rows in Table 17 must be in terms of changes. On the CEFT the difference in television status relates to the change (amount of gain) in CEFT scores. Children with more recent increased exposure show greater gains. Likewise, television and its interactions are related to change in Raven, not level. Also, when considering the 1979-1982 rows (in both Tables 16 and 17), added to the subject variables is the 1979 pretest score for each rulevant test. Thus, for the longitudinal contrast, the subject variables now include age, sex, village size, and area, as well as the score achieved in 1979. The amount of variance accounted for by each test (what the individual is bringing with him or her in the 1982 testing) thus must take into account the 1979 score.

Table 17 contains the most important summary information for the cognitive measures. An overview of its contents will therefore be presented. A sampling of some interesting results, mainly concerning significant interactions of certain variables with television, along with their possible interpretations, is presented in the next section.

The data in Table 17 can be examined in a number of ways, but generally by looking either down the columns (containing the four

categories, or sets, of predictor variables) and across the rows (listing the four tests and the four data sets).

The first column, labeled "television," contains data permitting an answer to the question: Does television by itself explain a significant proportion of the variance in test scores for the children in any of the three data sets which contain the television variable (the first three columns in Table 17)? The answer to this question is largely negative. The most significant "main television effect" was for the CEFT data provided by the test/retest children (see below).

Concerning the RSPM data for the 1979 sample, the proportion of test score variance accounted for by television (.02, as explained above) is not significant. However, the second and third columns indicate that television does interact in numerous ways with the subject variables to reliably predict cognitive measures. While many of these interactions are understandable, a large number of them are complex and difficult to comprehend. The configurations in the results, indicating significant differential effects of television, can be understood only through the assessment of complex interactions.

Considering the fourth column in Table 17, which is concerned with the age variable, it is clear (and expected) that a large proportion of the variance in test scores can be explained by age changes (maturation) alone. The nearly uniform array of age effects, for each test and each of the three data sets, attests to this fact. When the 1979 and 1982 data sets are considered separately, the data show that older children in these samples outperform the younger children. For those children in the 1979 sample who were retested in 1982, the significant increases in scores merely show that these

children improved upon their original test performance. The very similar pattern of results for the RSPM and PPVT, for all data sets, and for the 1982 sample on the Kohs Blocks, can largely be explained by the much larger number of children who took these tests at the two points in time. Relatively fewer children (N = 45) took the Kohs in 1979, and only 29 of them qualified for retesting on the Kohs in 1982. The less significant pattern of results for CEFT on the age variable can be attributed to two factors. First, as mentioned earlier, the CEFT has a low ceiling; older children will perform more or less uniformly well on it. Second, older children in the 1982 sample were not administered the test, and hence gains would not have been reflected in the regression analyses.

Considering the rows in Table 17, it is clear that scores on the Raven, especially, as well as the PPVT and the Kohs Blocks, are explainable via interactions with television (columns two and three). The CEFT, with one interesting exception, appears to have provided little useful information beyond the expected significant increases in performance with age.

As the last entry in the "Television" column in Table 17 indicates, the proportion of CEFT variance explained by the television variable is a statistically significant .08 (p .042). The effect of television on CEFT appears to be as important as simple maturation in explaining the variances. And television, for this small sample, interacts with village size and sex in helping to account for other proportions of the variance. A plausible explanation of why television by itself may have directly influenced CEFT performance and not the performance on the other tests concerns the nature of the task

presented by CEFT and how that task involves some of the same processes that are used with viewing the video screen. CEFT performance and television viewing both require visual exploration and attention to detail within a small constrained space. Thus the task presented by CEFT may be an analog of the visual search and scanning process that attentive television viewing involves. The more "effective" viewers, and/or those who have been exposed to television for a longer period, may be developing skills (or habits of task attentiveness) that are necessary for performance on tests which assess the ability to select a small part that is embedded in a more complex configuration of competing stimuli. Therefore, more recent access to television should lead to greater improvement in scores because these children have had a greater increase in practice on a similar task.

A return to some plausible factors influencing the results

In the introduction to the cognitive measures, a number of possible ways that television can affect the cognitive abilities of Native Alaskan children were briefly outlined. The following discussion returns to these possibilities and considers them in light of the data that were collected during this project.

The first four possibilities were concerned with whether television decreases (or increases) the spatial-perceptual abilities (Kohs, Raven, CEFT) and/or decreases (or increases) verbal abilities (PPVT) of Native Alaskan children. The data accumulated during this project provide little evidence that television is so pervasive and singularly riveting as to affect these abilities in any direct and systematic pattern over a period of differential exposure to the

medium. The lone exception to this may be the manner in which exposure to television seems to account directly for a significant proportion of the variance created by the CEFT.

A major reason why straightforward answers to such questions are not possible concerns a rather complex pattern of results at the subject variable level. For instance, contrary to a defensible *a priori* assumption, which could be made on the basis of Berry's (1976) influential book, is that children in the Northwest are generally more adept than those in the Southeast in spatial-perceptual abilities at the outset, and that males may be slightly more adept (perceptually differentiated) than females. Contrary to the plausibility of this assumption, the data show that this is not the case in a *comparative* sense among the current samples. On the Raven (1979 and 1982) females scored slightly and significantly *better* than males, and this was generally true (or at least a standoff) with respect to the area (NW vs. SE) contrast. The same is true for the sample of 84 children who took the test in 1979 and again in 1982. Only when the data are assessed at the interactive level, when the television level is considered, one can start entertaining differential effects. For instance, in 1979 relatively greater exposure to television seems to have contributed to a *decrease* in male performance on the Raven in the Northwest, and principally among the older children in smaller villages; males in the Southeast appear not to have been affected at all, regardless of exposure to television. For females in the Northwest cluster of villages, exposure to television appears to have contributed to an *increase* in Raven scores. Females in the Southeast with little exposure to television tend to have *higher* Raven scores.

However, for the 1982 sample this same sort of pattern was not present.

Two plausible explanations of this different pattern over time and across samples can be suggested. First, perhaps the influence of television is immediate and sharp for some children, but then levels out quickly so that any other small changes cannot be so easily discerned. Second, the sample of children tested in 1982 may have consisted of a different representation of their respective populations than in 1979. Given the sizes of the towns, this hardly seems tenable, however.

The Kohs Blocks data implicate television as a factor in altering test performance, but also in an interactive manner. This general statement is true for both of the cross-sectional data sets and the longitudinal data set. While small Ns for the 1979 sample (N = 45) and the longitudinal sample (N = 29) diminished our power to uncover more than a few statistically significant interactions, there are nevertheless some interesting trends in these two data sets which highlight interactive characteristics between subject variables and television exposure.

Consider, for instance, the 1979 Kohs data. The overall mean score was 36.6, with the 24 males scoring higher ($\bar{x}$ = 42.3) than the 21 females ($\bar{x}$ = 30.2). Moreover, males scored higher than females in both of the Area contrasts (Northwest and Southeast). However, a significant area by television interaction shows that boys and girls were affected differently by television. Boys in the Northwest with lower exposure to television scored higher (44.0) than boys with greater exposure to television (35.5). The opposite pattern was

evident for boys in the Southeast, where those with low exposure scored lower on Kohs (40.7) than those with greater television exposure (51.2). For girls, the pattern in the Northwest was somewhat similar to the Northwest boys' pattern: girls with lower television exposure scored higher (46.7) than girls with higher exposure (13.0). But for the Southwest girls, their pattern of scores was quite different from their male counterparts' pattern: girls with lower television exposure scored higher (36.0) than those with greater exposure (19.3).

A total of 123 children (68 boys and 55 girls) were administered the Kohs Blocks in 1982. Because of this fairly large sample size, more confidence can be placed in the regression analyses accomplished with those data than with the 1979 data. While the overall means for males and females were essentially the same (40.7 and 42.2, respectively), both males and females in the Southeast achieved significantly better scores than their same-sex counterparts in the Northwest. When broken down further, the television variable seems to affect this aspect of cognitive performance of certain groups differently as a function of Area and extent of television exposure. Females in the Northwest who have had lower exposure to television performed better on Kohs ($\bar{x}$ = 47.9), while females in the same area who have had more extensive exposure to television received lower scores ($\bar{x}$ = 29.8). Since this significant interaction also involved age, this differential effect for females is especially true for the older girls in the Northwest who were in the lower exposure to television group. Somewhat the reverse appears to have happened among females in the Southeast. Among them, greater exposure to television

is related to a higher mean (51.6), while the average score for those with lower exposure to television is lower (39.1). Also, for this group, age-related scores are more linear for both groups. This supports the notion reported previously (Forbes and Lonner, 1980b), that exposure to television is implicated more among the Southeast girls in enhancing the skills tapped by the Kohs than it is among the Northwest girls; television exposure for the latter may suppress performance on Kohs, and this especially seems to be the case more for females in smaller Northwest villages who have had more exposure to television than it is for their smaller village counterparts who have had less television exposure.

Comparing the 1979 interactions with the 1982 interactions on the variables of sex by Area by television exposure, we can report that the impact of television appears to have been more disruptive for the 1979 female sample than for the 1982 female sample. For the 1979 group, television may have been a more "volatile" factor for some children; the novelty of the medium may have, by 1982, "run its course" for this more recent sample, perhaps especially for the boys. The scores for boys in the 1982 sample suggest that television is minimally disruptive to the cognitive processes assessed by the Kohs Blocks. The best example of this is that the 1982 sample of Northwest boys with lower television exposure scored just 7 points lower, on the average, than boys with higher television exposure (30.7 versus 37.7). In the 1979 Northwest sample of boys, there was a 9-point spread between scores on the television exposure variable, but in the opposite direction; the net change was therefore 16 points. Among the Southeast boys in 1982, there was even a smaller gap between mean

scores: for those with lower television exposure the mean score was 51.6, compared with the mean of 48.3 for those with higher exposure. The 1979 data also suggest that television at that time had less of an indirect impact on boys than on girls, as noted earlier.

If the 1982 Kohs data are assessed with respect to the extent to which television has had an "educational" or "cognitive enhancing" function (that is, television contributing to greater scores on this non-verbal measure of cognitive ability), then it can be stated that Northwest boys and Southeast girls are helped most by television. Cohort improvement over 1982 showed that the higher television exposure groups in both areas scored higher in 1982, whereas in 1979 they scored lower than the children with lower exposure to television. Northwest girls seem to suffer most at the hands of television exposure. For instance, there was an 18-point difference between those with high television exposure compared with those with lower exposure (mean score of 47.9 for the low exposure group and 29.8 for the high exposure group).

The foregoing discussion, which concerned some contrasts between and among the two cross-sectional data sets, should be juxtaposed with the small (N = 29) sample who took the Kohs in both 1979 and 1982. The overall significant (p .001) F-ratio yielded by the covariance regression analysis is mainly attributed to the high test/retest correlation (r = .74). However, there are some interesting trends which approached significance, and these involve sex by Area by television interactions, just as they do in the 1979 and 1982 data sets. In the longitudinal (covariance) sample, the 13 retested females outscored (x = 81.1) the 16 retested males (x = 67.5). But

the same trend as seen in the 1979 and 1982 data, which implicate television indirectly, holds for the Northwest females as well: those with lower television exposure scored much higher (x = 102.6) than those with high exposure (x = 26.0). Mean scores for the Southeast girls with lower and higher television exposure were quite similar (80.7 vs. 83.5). For males, a reverse trend is evident. The Northwest boys with lower television exposure scored lower (x = 66.9) on Kohs than those with higher exposure (x = 77.5). The test/retest boys in the Southeast, however, showed an opposite trend: the lower exposure group had a mean of 67.0 as opposed to a mean of 51.0 for the higher exposure group.

Despite the lower Ns in 1979 and the 1979-1982 samples, a convincing interactive pattern for the Kohs Blocks runs through the three data sets. This pattern strongly suggests that television is (1) indirectly but certainly related to decreases in Kohs scores for Northwest girls with higher television exposure, (2) indirectly but certainly related also to decreases, although less pronounced, on Kohs scores among Northwest boys with higher television exposure, and (3) not as significant a factor for boys than it is for girls with respect to change scores on this test.

Summary of cognitive test results

This empirical examination of television's influence on the cognitive, spatial, and perceptual abilities of Native Alaskan children was guided by the same major premise that has guided virtually all research oriented toward studying the behavioral effects of television. This premise is that television is a phenomenon which has great potential to shape the attitudes, habits, comprehension and,

indeed, all aspects of the behavior of the viewer. It acts on individuals, and individuals react to it, but not necessarily in a uniform manner. As Comstock et al. (1978, p. 385) have noted, "... a great deal of information is lost when the focus is on a specific kind of effect" (emphasis added). One scarcely needs to be reminded of the incredibly complex social network in which all human learning takes place.

Bandura (1977, 1978), a leading social learning theorist, has nicely captured the essence of this complex network in his notion of "reciprocal determinism," a heuristic used extensively by many television researchers (e.g., Salomon, 1979). In reciprocal determinism there are three interdependent and ever-changing factors that are constantly interacting with one another. Situational (environmental) variables provide the setting in which one behaves, person variables determine how a situation is analyzed, which behaviors are chosen, and how stimuli are encoded and stored, and behavior which provides both information concerning the person's analysis of the situation and how, in turn, the environment is modified.

These three factors, as Bandura points out, are not always equally powerful. Sometimes the situational variables are so overwhelming that they may override all else. Other times the person variables (generalized dispositions) such as cognitive skills, capacities, values, expectancies, encoding strategies, and self-efficacy are paramount. It is against the background of this interactive triangle that one must interpret data such as those collected during this project. And, in the same breath, one must keep

in mind that the tests used during this project are devices whose intent it is to assess only limited aspects of cognition and perception. The behavior (here, performance on four well-known tests) of Native Alaskan children (all of whom vary considerably at the outset on a host of personological variables) is considered within different environments, one assumedly important feature of which is the variable amount of exposure to television.

We have documented in this section of the report that differential exposure to television (that is, variations in the environment, which includes different levels of exposure to television) indirectly but most assuredly interacts with persons, producing different patterns of behavior (test performance). Only in very rare and perhaps quite artificial circumstances (for example, constant television-mediated bombardment of spatial symbols or other geometric forms) should one expect to find any commercial medium to override the person variables in a uni-directional manner to such an extent that an avalanche of behavior change (test scores) results in linearity. This is precisely what analysis of data from this study has shown. The interactions between subject variables and television that have been presented here are, as expected, complex. Bandura's reciprocal determinism is alive and well in Alaska. The test scores and their interactions can best be understood against an informed knowledge of the people and their different cultures. Why, for instance, should females in the Northwest who have had significant exposure to television be affected more than boys with respect to performance on the Kohs Blocks? And why should greater television exposure among the Northwest females have contributed to an increase

in Raven scores in 1979, but not in 1982? Is it true that there is a critical period, or "window," during which television's impact is sharp but short-lived? Do Native Alaskan children, especially boys, become inured to the medium? Are girls, especially those in the Southeast but also noticeably in the Northwest, affected more than boys by the increased presence of television? These and other strong leads are worthy of consideration by Alaskan ethnographers, psychologists, and educators at the level of policy implementation.

Any further interpretations of the data, and those that have been discussed in this section of the report, should keep in mind the limitations of the data. Several of these limitations were outlined. However, our interpretations of the data have been fairly conservative and cautious in an area where speculation could easily gain the upper hand. The patterns and trends that have been uncovered can be confidently considered to reflect many of television's interactive effects on these cognitive measures.

SUMMARY

Entertainment television is one of the more controversial agents of change which have impacted rural Alaska's Native people in the last thirty years. Many of the same concerns about television's impact on children which have fueled nationwide debates have been expressed by parents, Native leaders, and educators in Alaska. In addition, it has been feared that commercial television would contribute to the existing trend away from traditional Native cultural values and language use. On the other hand, Native parents felt television might teach their children to cope more effectively with the White man's world and improve their ability to speak English. Many rural educators hoped that the general knowledge of the world outside the village which was gained from television might support material presented in school and improve academic achievement.

The research presented in this report has attempted to provide objective evidence on the impact of the introduction of television to rural Alaska, in particular those unplanned effects which accompany the introduction of a new technology to an existing way of life. The evidence is not as simple or straightforward as decision makers might wish. This is in part because young as well as older viewers play an active and selective role in processing the information presented on television, and therefore the impact is not necessarily the same on all viewers. It is also partly because there are practical limits to what and how researchers can measure. However, the evidence from this research clearly indicates that television has changed attitudes and behaviors of Native children and adults.

One of the impacts of television has been on the use of other media, i.e., movies, radio, books, and magazines. As has been the case elsewhere when television was introduced, movies have been almost eliminated and radio listening has decreased. The more important long-range implications of this change in behavior probably involve the social functions of radio and movies rather than their entertainment and information functions. Television in its present form does not promote regional identity as radio has done, and it isolates members of a community rather than bringing them together as movies did. Among young people, recreational reading of books has decreased but reading of such popular culture magazines as Teen, People, and Off Road has increased. It is possible that the number of words read is the same and the level of vocabulary is the same, but the values of the mainstream "consumer society" are presented in the magazines in a manner not likely to appear in books. The influence of the consumer-oriented magazines is augmented by television and its commercials, as evidenced by the list of items seen on television which are desired by the participants in this study. On the other hand, the decrease in desire to acquire those items shown on television associated with age, longer exposure to television, and more experience with the world outside the village indicates that rural viewers are learning to deal with television's influence.

Critics have expressed concern about the impact on minority children's attitudes toward their own ethnic groups as a result of negative portrayals of minority characters on television. However, there is no evidence that television has had an effect on Alaskan Native children's view of their own group, perhaps because

identifiably Alaskan Native Americans almost never appear on television. Nor is there evidence that television has affected their attitudes toward White people; this may be because the medium presents a picture of White people which is in agreement with previously held opinions, or because television cannot corpete with the first-hand experience with White people, mostly teachers, available in their own communities. Conversely, there is evidence of television's influence on attitudes toward Black people. The viewing of "Roots" improved attitudes toward Black people, and exposure to television in general has not had the negative impact predicted by some Black leaders.

Do rural Alaskan Native students recognize that life as portrayed on television is not real? Yes and no: The majority of students recognize that the actions portrayed on the screen are not occurring in real life and that the characters involved are played by actors. However, more than half of the students believe television programs represent "social reality," i.e., that the values, attitudes and behaviors portrayed are like those one could expect in the world outside the village, and increased exposure to television increases this belief. Research on television's effects in other settings suggests that the importance of reality beliefs lies in the increased tendency to imitate behavior believed to be real, and the setting-up of expectations of other's behavior in the world outside the village.

That the values and attitudes represented as social reality on the television screen can influence values and attitudes of viewers in the village setting as well is demonstrated by the change in sex role stereotyping associated with the introduction of television. As has been indicated by research elsewhere in the United States, television

is associated with increased sex stereotyping, although that effect is modified by other influences in the rural Alaskan child's environment.

Research elsewhere has shown that visiting between households and participation in community events decreases considerably when television is introduced. With the passing of time, visiting and participation improve, but never equal their pre-television levels. These behaviors were not measured in this study, although anecdotal evidence indicates the effects were the same in rural Alaska. However, evidence from this study indicates that the feeling that the individual family is more important than the community is associated with television and is maintained even if participation in community affairs improves over time.

Children in the continental United States gain knowledge of different occupations from television, and their occupational aspirations are affected by viewing. In rural Alaska, television has had no effect on the variety or status level of Native children's occupational aspirations or expectations. Nor has it brought about the general improvement in the use of the English language which Native parents had hoped for, although further analyses may identify sub-groups which have made language gains related to television exposure. It was not possible to accurately measure television's effect on the use of Native languages, but the information which is available does not implicate television. It seems more likely that Native parents' reluctance to insist on exclusive use of their Native language in their own homes is contributing to their children's lack of use of Native languages. In spite of the fears of Native parents, television is not influencing children to want to move away from the villages.

True, two-thirds of the children interviewed did express the desire to live elsewhere when adult, but those responses were associated not with television but, rather, with living in a larger village, being from Southeast Alaska and having previously lived outside the village. The measures we used provided no evidence that the introduction of television has improved general knowledge which might improve academic achievement; however, the measures used tapped only a portion of the information associated with academic achievement.

Entertainment television via satellite is a political and practical reality in rural Alaska. It would take a very brave, or a very foolish legislator to attempt to terminate it, particularly because it also offers time-value programming to urban viewers. In addition, the system which provides television provides other telecommunication services of proven social value. The only question is, will its viewers passively accept it in its present form or will they demand it be modified to better meet their needs?

The emphasis of the state's original Television Demonstration Project was on hardware and the delivery system, not on the possible social and cultural impacts television might have on the viewing audience. This same emphasis continues to dominate policy and the allocations of funds. There are alternatives. Among them are the regionalizing of television and the support of programs to show adults and children how to critically use television. Policy makers need to recognize that the television delivery system they support has influenced, and will continue to influence, attitudes, beliefs and behaviors of its viewers throughout Alaska. Whether its influence is good or bad is a value judgment, not a research question. However, in

responding to the research questions, we hope we have provided information which policy makers will use in making those judgments.

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Appendix A

Recommended Readings on Television Research

Appendix A

Recommended Readings on Television Research

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Appendix B

Tables by Site/Grade and Age/Grade

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Table 1

Site by Grade Group Composition of 1979 Sample

	ESKIMO				ATHAPASKAN		TLINGIT/HAIDA		ALEUT	
	Old Sites		New Sites		Old Sites		New Sites		Old Site	
	ES-1	ES-2	ES-3	ES-4	AP-5	AP-6	TH-9	TH-10	AL-8	Totals
Group 1 Grades 1 & 2	5	6	12	11	5	5	14	12	1	71
Group 2 Grades 3 & 4	5	6	12	9	3	5	14	12	4	68
Group 3 Grades 5 & 6	5	5	12	12	5	6	13	12	4	72
Group 4 Grades 7 & 8	5	5	13	13	5	6	15	12	4	78
Group 5						2			5	7
TOTALS	20	20	49	45	18	23	56	48	18	N=296

Note: ES = Eskimo, AP = Athapaskan, TH = Tlingit/Haida, AL = Aleut.
Odd numbers denote TV villages, even numbers No-TV villages.

Table 2

Age/Grade Range for 1979 Measures

	Group 1	Group 2	Group 3	Group 4	Group 5	Total N	Test / Retest
Children's Interview						296	
Sociocultural							
Attitudinal						131	36
Twenty Statements						190	19
Osgood Semantic Differential						221	49
Which-Pich						222	49
Rosenzweig P-F Scale						218	49
Sex-Role						163	
It Test						21	21
Cognitive							
Children's EFT						204	39
GEFT						73	
Kohs Blocks						53	
Raven Matrices						141	
Peabody PVT						131	
SERT						63	

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Appendix C

Selected Responses from
Children's and from
Adults' 1982 Interviews

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LANGUAGE QUESTIONS BY AREA

	Northwest Freq.	%	Southeast Freq.	%
PARENTS LANGUAGE				
English	62	27.8	106	81.5
Native	49	22.0	2	1.5
Both	111	49.8	21	16.5
Other	1	.4	1	.8
Total	223	100.0	130	100.0
WHAT LANGUAGE DO CHILDREN SPEAK WITH: PARENTS				
English	183	82.1	126	100
Native	5	2.2	0	--
Both	35	15.7	0	--
Total	223	100.0	126	100
WHAT LANGUAGE DO CHILDREN SPEAK WITH: SIBLINGS				
English	203	91.0	125	100
Native	3	1.3	0	--
Both	17	4.9	0	--
Total	223	97.2	125	100
WHAT LANGUAGE DO CHILDREN SPEAK WITH: FRIENDS				
English	202	90.6	131	100
Native	1	.4	0	--
Both	20	5.6	0	--
Total	223	96.6	131	100

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MOST IMPORTANT PERSON YOU CAN THINK OF BY:

Variable	Ego		Local		State		National	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
SEX								
Male	143	89.4	6	3.7	1	.6	10	6.3
Female	141	94.0	3	2.0	2	1.3	4	2.7
EXPOSURE								
Village only	47	82.5	4	7.0	2	3.5	4	7.0
Region only	20	95.2	0	-	0	-	1	4.8
Alaska town	64	88.9	3	4.2	0	-	5	6.9
Lower 48	81	95.3	2	2.4	1	1.2	1	1.2
Outside U.S.	69	95.8	0	-	0	-	3	4.2
REGION								
Northwest	172	90.5	8	4.2	2	1.1	8	4.2
Southeast	112	93.3	1	.8	1	.8	6	5.0
TV EXPOSURE								
Low .5	21	77.8	0	-	1	3.7	5	18.5
2.0	118	97.5	2	1.7	0	-	1	.8
4.0	57	98.3	0	-	0	-	1	1.7
4.5	57	89.1	1	1.6	1	1.6	5	7.8
High 5.5	31	77.5	6	15.0	1	2.5	2	5.0

MOST IMPORTANT PERSON IN WORLD BY:

	Ego		Local		State		National	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
SEX								
Male	69	51.1	8	5.9	2	1.5	56	41.5
Female	88	71.0	4	3.2	1	.8	31	25.0
EXPOSURE								
Village only	26	59.1	4	9.1	1	2.3	13	29.5
Region only	7	46.7	2	13.3	1	6.7	5	33.3
Alaska town	36	63.2	1	1.8	0	-	20	35.1
Lower 48	46	59.0	4	5.1	1	1.3	27	34.6
Outside U.S.	41	67.2	1	1.6	0	-	19	31.1
REGION								
Northwest	100	63.3	10	6.3	3	1.9	45	28.5
Southeast	57	56.4	2	2.0	0	-	42	41.6
TV EXPOSURE								
Low .5	12	52.2	2	8.7	1	4.3	8	34.8
2.0	67	63.2	4	3.8	1	.9	34	32.1
4.0	33	71.7	0	-	0	-	13	28.3
4.5	26	52.0	1	2.0	0	-	23	46.0
High 5.5	19	55.9	5	14.7	1	2.9	9	26.5

MOST IMPORTANT PERSON IN VILLAGE BY:

Variable	Ego Freq.	Ego %	Local Freq.	Local %	State Freq.	State %
SEX						
Male	112	74.7	38	25.3	0	-
Female	122	87.1	16	11.4	2	1.4
EXPOSURE						
Village only	42	80.8	10	19.2	0	-
Region only	11	64.7	6	35.3	0	-
Alaska town	55	76.4	17	23.6	0	-
Lower 48	62	80.5	15	19.5	0	-
Outside U.S.	61	88.4	6	8.7	2	2.9
REGION						
Northwest	142	80.7	34	19.3	0	-
Southeast	92	80.7	20	17.5	2	1.8
TV EXPOSURE						
Low .5	18	78.3	5	21.7	0	-
2.0	97	84.3	18	15.7	0	-
4.0	45	83.3	9	16.7	0	-
4.5	45	72.6	15	24.2	2	3.2
High 5.5	29	80.6	7	19.4	0	-

MOST IMPORTANT PERSON IN ALASKA BY:

	Ego Freq.	Ego %	Local Freq.	Local %	State Freq.	State %	National Freq.	National %
SEX								
Male	73	53.7	8	5.9	51	37.5	4	2.9
Female	101	72.7	4	2.9	29	20.9	5	3.6
EXPOSURE								
Village only	29	61.7	2	4.3	12	25.5	4	8.5
Region only	10	58.8	3	17.6	3	17.6	1	5.9
Alaska town	42	62.7	3	4.5	21	31.3	1	1.5
Lower 48	48	61.5	2	2.6	25	32.1	3	3.8
Outside U.S.	44	68.8	2	3.1	18	28.1	0	-
REGION								
Northwest	108	65.1	8	4.8	41	24.7	9	5.4
Southeast	66	60.6	4	3.7	39	35.8	0	-
TV EXPOSURE								
Low .5	10	50.0	1	5.0	8	40.0	1	5.0
2.0	81	70.4	5	4.3	28	24.3	1	.9
4.0	30	62.5	1	2.1	14	29.2	3	6.3
4.5	33	57.9	1	1.8	23	40.4	0	-
High 5.5	20	57.1	4	11.4	7	20.0	4	11.4

HOURS OF TELEVISION WATCHED ON

Hours	School Days		Saturday		Sunday	
	Freq.	%	Freq.	%	Freq.	%
0	5	1	6	2	22	6
1	34	9	13	4	40	11
2	61	17	23	6	50	14
3	70	19	41	11	49	14
4	61	17	48	13	56	16
5	52	14	53	15	42	12
6	44	12	55	15	34	10
7	14	4	25	7	18	5
8	14	4	38	11	17	5
9	9	2	16	4	6	2
10	1	0	14	14	9	3
11	0	0	4	4	2	1
12	0	0	25	25	11	3
No response	2	0	6	2	11	3
Total	367	100	367	100	367	100
Mean	3.93		5.75		4.17	
SD	2.05		2.91		2.82	
SE	.11		.15		.15	

DO YOU LISTEN TO THE RADIO? BY AGE

	7-10		11-13		≥ 14	
	Freq.	%	Freq.	%	Freq.	%
No	43	38.7	47	40.9	69	54.8
Yes	68	61.3	67	58.3	56	44.4
No response	0	-	1	.9	1	.8

DO YOU LISTEN TO THE RADIO? BY

	No		Yes		Blank	
Variable	Freq.	%	Freq.	%	Freq.	%
REGION						
Northwest	78	33.3	142	64.3	1	.5
Southeast	81	61.8	49	37.4	1	.8
SEX						
Male	92	50.5	90	45.5	0	-
Female	67	39.4	101	59.4	2	1.2

WHICH RADIO SHOWS DO YOU LISTEN TO?

	First Choice		Second Choice	
Show	Freq.	%	Freq.	%
Schedules	1	.5	0	-
News	16	8.4	6	13.3
Weather	3	1.6	3	6.7
Music	111	58.4	17	37.8
Messages	31	16.3	8	17.8
Sports	8	4.2	2	4.4
Stories	9	4.7	3	6.7
Everything	7	3.7	0	-
Talk shows	1	.5	6	13.3
Other	3	1.6	0	-
No response	177	-	322	-
Total	367	100.0	367	100.0

WHERE WOULD YOU LIVE IF YOU COULD AFTER FINISHING SCHOOL?

Place	First Choice		Second Choice		Third Choice	
	Freq.	%	Freq.	%	Freq.	%
Own village	101	27.8	0	-	0	-
Native location	31	8.5	3	15.8	0	-
Transitional	39	10.7	0	-	1	20.0
Alaska town	88	24.2	4	21.1	1	20.0
Lower 48	62	17.1	6	31.6	1	20.0
Hawaii	29	8.0	6	31.6	1	20.0
Other non U.S.	6	1.7	0	-	0	-
Other Alaska	2	.6	0	-	1	20.0
Don't know	5	1.4	0	-	0	-
No response	4	-	348	-	362	-
Total	367	100.0	367	100.0	367	100.0

WHERE WOULD YOU LIKE TO LIVE? BY AGE

	7-10		11-13		≥ 14	
	Freq.	%	Freq.	%	Freq.	%
Native village	37	33.9	34	30.4	50	42.4
Transitional	18	16.5	12	10.7	9	7.6
Alaska town	33	30.3	28	25.0	25	21.2
Lower 48 and Hawaii	21	19.3	38	33.9	34	28.8

WHERE WOULD YOU LIKE TO LIVE? BY REGION

	Northwest						Southeast					
	7-10		11-13		≥ 14		7-10		11-13		≥ 14	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Native village	25	35.7	22	31.0	38	50.7	12	30.8	12	29.3	12	27.9
Transitional	18	25.7	12	16.9	9	12.0	0	-	0	-	0	-
Alaska town	22	31.4	20	28.2	19	25.3	11	28.2	8	19.5	6	14.0
Lower 48 and Hawaii	5	7.1	17	23.9	9	12.0	16	41.0	21	51.2	25	58.1

FIRST PLACE NAMED TO LIVE. BY SEX OR AREA

Response	Sex				Area			
	Male		Female		Northwest		Southeast	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Own village	57	30.8	38	22.6	60	27.0	35	26.7
Native location	16	8.6	15	8.9	27	12.2	4	3.1
Transitional	29	15.7	10	6.0	39	17.6	0	-
Alaska town	34	18.4	52	31.0	61	27.5	25	19.1
Lower 48	32	17.3	29	17.3	19	8.6	42	32.1
Hawaii	11	5.9	17	10.1	11	5.0	17	13.0
Other non U.S.	4	2.2	2	1.2	3	1.4	3	2.3
Other Alaska	0	-	2	1.2	2	.9	0	-
Don't know	2	1.1	3	1.8	0	-	5	3.8

WHERE WOULD YOU LIKE TO LIVE?

	Northwest				Southeast			
	Male		Female		Male		Female	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Native village	54	45.0	31	32.3	17	28.8	19	29.7
Transitional	29	24.2	10	10.4	0	-	0	-
Alaska town	23	19.2	38	39.6	11	18.6	14	21.9
Lower 48 and Hawaii	14	11.7	17	17.7	31	52.5	31	48.4

Males: $\chi^2 = 22.5$
$p = .0001$
3 df

Females: $\chi^2 = 13.43$
$p = .0038$
3 df

COULD CHILD NAME LAST BOOK READ? BY

	No		Yes	
	Freq.	%	Freq.	%
SEX				
Male	53	35.3	97	64.7
Female	36	24.5	111	75.5
REGION				
Northwest	49	26.2	125	71.8
Southeast	40	32.5	83	67.5

LAST READ A BOOK BY:

	Within day		In past week		2-3 weeks ago		> month ago	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
SEX								
Male	59	43.1	46	33.6	9	6.6	23	16.8
Female	62	44.3	52	37.1	8	5.7	18	12.9
REGION								
Northwest	67	42.4	63	39.9	10	6.3	18	11.4
Southeast	54	45.4	35	29.4	7	5.9	23	19.3

WHEN WAS LAST BOOK READ? BY AGE

	7-10		11-13		≥ 14	
	Freq.	%	Freq.	%	Freq.	%
Within day	47	55.3	43	43.9	31	33.0
In past week	26	30.6	40	40.8	32	34.0
2-3 weeks ago	2	2.4	8	8.2	7	7.4
> month ago	10	11.8	7	7.1	24	25.5

COULD THE CHILD NAME THE LAST BOOK?

Did not name book	29	30.2	30	28.8	30	30.9
Named book	67	69.8	74	71.2	67	69.1

WHEN DID YOU LAST READ A

When	Magazine Freq.	Magazine %	Newspaper Freq.	Newspaper %	Book Freq.	Book %
Within day	63	33.7	65	39.2	125	44.3
In past week	88	47.1	66	39.8	98	34.8
2-3 weeks ago	17	9.1	23	13.9	18	6.4
> month ago	19	10.2	12	7.2	41	14.5
Total	187	100.0	166	100.0	282	100.0

WHEN WAS LAST MAGAZINE READ? BY AREA

Response	Northwest Freq.	Northwest %	Southeast Freq.	Southeast %
Within day	32	31.7	29	36.2
In past week	50	49.5	36	45.0
2-3 weeks ago	7	6.9	9	11.2
> month ago	12	11.9	6	7.5

WHAT WAS THE LAST MAGAZINE READ?
WHAT WAS THE LAST NEWSPAPER READ?

Category	Magazine Freq.	Magazine %	Category	Newspaper Freq.	Newspaper %
National news	29	9.6	Alaska city paper	79	26.7
National specialty	90	29.8	Regional paper	1	.3
National general	29	9.6	Native paper	34	11.5
Humor	11	3.6	Local paper	14	4.7
Catalog	3	1.0	National paper	11	3.7
Alaska magazines	15	5.0	Unspecified	16	5.4
Other	18	6.0	Don't read papers	123	41.6
Don't read magazines	107	35.4	School paper	18	6.1
No response	65	-	No response	71	-
Total	367	100.0		367	100.0

CHILD-PARENT-TV INTERACTION

WHO DECIDES WHAT YOU WATCH? BY AGE GROUP

Age	7-10		11-13		≥ 14	
	Freq.	%	Freq.	%	Freq.	%
Self	29	26.4	36	31.3	50	41.0
Parent, elder	57	51.8	49	42.6	23	18.9
Older sibling	9	8.2	10	8.7	2	1.6
No rules	4	3.6	16	13.9	33	27.0
Can't classify	7	6.4	3	2.6	2	1.6
Group decision	4	3.6	1	.9	12	9.8
CAN YOU WATCH ANY SHOW?						
No	57	51.4	64	54.7	26	20.6
Yes	54	48.6	53	45.3	100	79.4
HOW LATE CAN YOU WATCH?						
to 9 p.m.	43	39.8	16	13.7	3	2.4
9 to 12 p.m.	52	48.1	70	59.8	61	48.4
After 12 p.m.	6	5.6	11	9.4	38	30.2
Depends	4	3.7	11	9.4	8	6.3
Any time	3	2.8	8	6.8	15	11.9
Up to parent	0	-	1	.9	1	.8
DO PARENTS EVER MAKE YOU TURN TV OFF?						
No	22	20.2	20	17.4	47	37.9
Yes	87	79.8	95	82.6	77	62.1
WHY DO PARENTS MAKE YOU TURN TV OFF?						
Not appropriate	9	11.5	13	13.8	12	16.5
Do other things	12	15.4	16	17.0	15	19.5
To watch others	38	48.7	46	48.9	32	41.6
Punishment	4	5.1	3	3.2	1	1.3
Don't like show	8	10.3	5	5.3	7	9.1
Other	7	9.0	11	11.7	10	13.0
DO PARENTS WATCH TV WITH YOU?						
No	7	6.4	4	3.4	6	4.8
Yes	103	93.6	113	96.6	120	95.2
DO PARENTS TALK WITH YOU ABOUT TV?						
No	69	67.6	75	67.6	80	66.1
Yes	33	32.4	36	32.4	41	33.9

WHO DECIDES WHAT YOU WATCH?

	Self		Parents		Older sib.		No rules		Can't class.		Group	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
SEX												
Male	56	31.3	63	35.2	10	5.6	32	17.9	7	3.9	11	6.1
Female	59	35.1	66	39.3	11	6.5	21	12.5	5	3.0	6	3.6
REGION												
Northwest	89	41.2	63	29.2	14	6.5	28	13.0	12	5.6	10	4.6
Southeast	26	19.8	66	50.4	7	5.3	25	19.1	0	-	7	5.3
AGE												
7-10	29	26.4	57	51.8	9	8.2	4	3.6	7	6.4	4	3.6
11-13	36	31.3	49	42.6	10	8.7	16	13.9	3	2.6	1	.9
≥ 14	50	41.0	23	18.9	2	1.6	33	27.0	2	1.6	12	9.8

DO YOU SEE THINGS ON TV THAT YOU WANT? BY SEX AND AREA

	Northwest				Southeast			
	Males		Females		Males		Females	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
No	14	11.6	11	10.9	12	18.8	10	14.5
Yes	107	38.4	90	89.1	52	81.3	59	85.5
DO PARENTS GET YOU WHAT YOU WANT?								
No	81	74.3	46	50.5	34	66.7	30	53.6
Yes, sometimes	28	25.7	45	49.5	17	33.3	26	46.4
WHAT DO PARENTS SAY WHEN YOU ASK?								
No money	8	15.4	8	11.0	2	8.3	1	2.9
For a reason	3	5.8	2	2.7	1	4.2	6	17.1
Maybe	11	21.2	13	17.8	8	33.3	10	28.6
Yes	4	7.7	10	13.7	3	12.5	6	17.1
No	21	40.4	31	42.5	7	29.2	9	25.7
Other	5	9.6	9	12.3	3	12.5	3	8.6

DO YOU SEE THINGS YOU WANT? BY AGE AND AREA

	Northwest						Southeast					
	7-10		11-13		≥ 14		7-10		11-13		≥ 14	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
No	7	10.0	7	9.6	11	13.9	4	9.8	4	9.9	14	29.2
Yes	63	90.0	66	90.4	68	86.1	37	90.2	40	90.9	34	70.8
DO YOUR PARENTS GET YOU WHAT YOU WANT?												
No	33	51.6	40	59.7	54	78.3	16	43.2	23	60.5	25	78.1
Yes, sometimes	31	48.4	27	40.3	15	21.7	21	56.8	15	39.5	7	21.9
WHAT DO YOUR PARENTS SAY WHEN YOU ASK FOR THINGS?												
No money	3	6.4	8	17.8	5	15.2	2	6.9	1	4.5	0	-
For a reason	1	2.1	3	6.7	1	3.0	4	13.8	2	9.1	1	12.5
Maybe	9	19.1	9	20.0	6	18.2	6	20.7	7	31.8	5	62.5
Yes	8	17.0	6	13.3	0	-	5	17.2	4	18.2	0	-
No	24	51.1	14	31.1	14	42.4	11	37.9	5	22.7	0	-
Other	2	4.3	5	11.1	7	21.2	1	3.4	3	13.6	2	25.0

DO YOU SEE THINGS ON TV YOU WANT? BY AGE

	7-10		11-13		≥ 14	
	Freq.	%	Freq.	%	Freq.	%
No	11	9.9	11	9.4	25	19.7
Yes	100	90.1	106	90.6	102	80.3
DO PARENTS GET YOU WHAT YOU WANT?						
No	49	48.5	63	60.0	79	78.2
Yes	52	51.5	42	40.0	22	21.8
WHAT DO PARENTS SAY WHEN YOU ASK?						
No money	5	6.6	9	13.4	5	12.2
For a reason	5	6.6	5	7.5	2	4.9
Maybe	15	19.7	16	23.9	11	26.8
Yes	13	17.1	10	14.9	0	-
No	35	46.1	19	28.4	14	34.1
Other	3	3.9	8	11.9	9	22.0

WHAT DO YOU SEE ON TV THAT YOU WANT?

	First choice		Second choice		Third choice	
	Freq.	%	Freq.	%	Freq.	%
Travel (ticket)	4	1.3	1	.6	1	1.6
Air mattress	0	-	1	.6	0	-
Airplane	1	.3	4	2.3	2	3.2
Appliances	3	1.0	0	-	0	-
Bed	4	1.3	1	.6	0	-
Bike	21	6.8	8	4.7	4	6.5
Boat	3	1.0	7	4.1	0	-
Books	2	.6	3	1.8	0	-
Camera	3	1.0	0	-	0	-
Camping gear	0	-	0	-	0	-
Car	85	27.5	19	11.1	6	9.7
Clothes	25	8.1	18	10.5	2	3.2
Atari computer	7	2.3	9	5.3	2	3.2
Food items	7	2.3	5	2.9	5	8.1
Furniture	1	.3	1	.6	2	3.2
Games, toys	49	15.9	20	11.7	9	14.5
Garden	1	.3	0	-	0	-
Gifts for others	0	-	0	-	0	-
Guns	7	2.3	2	1.2	0	-
House	10	3.2	11	6.4	5	8.1
Ice cream maker	1	.3	0	-	0	-
Jewelry, watch, gold	5	1.6	3	1.8	2	3.2
Job	0	-	0	-	1	1.6
Make-up	0	-	1	.6	0	-

WHAT DO YOU SEE ON TV THAT YOU WANT? (continued)

	First choice		Second choice		Third choice	
	Freq.	%	Freq.	%	Freq.	%
Money	6	1.9	5	2.9	1	1.6
Motorcycle	20	6.5	22	12.9	4	6.5
Movies	0	-	0	-	0	-
Nice teachers	1	.3	0	-	0	-
Pool table	0	-	0	-	0	-
Real estate	1	.3	0	-	0	-
Records, tapes, V.D.	0	-	0	-	1	1.6
Own room	3	1.0	3	1.8	0	-
Science material	2	.6	1	.6	2	3.2
Sno-go	1	.3	1	.6	0	-
Sporting goods	9	2.9	6	3.5	4	6.5
Swimming pool	2	.6	4	2.3	1	1.6
Tan	0	-	2	1.2	0	-
Tape, stereo	0	-	0	-	0	-
Things, Lots of	8	2.6	6	3.5	5	8.1
Totem pole	6	1.9	2	1.2	0	-
Truck, van	1	.3	0	-	0	-
TV	1	.3	3	1.8	1	1.6
TV show named	2	.6	1	.6	1	1.6
Typewriter	7	2.3	0	-	0	-
Animals	0	-	1	.6	1	1.6

FIRST FAVORITE SHOW (in descending order)

Show	Frequency	%
Cartoons	34	9.5
Dukes of Hazzard	27	7.6
Movies	19	5.3
Knight Rider	17	4.8
Fall Guy	17	4.8
Walt Disney	16	4.5
Dallas	13	3.6
Love Boat	13	3.6
Facts of Life	12	3.4
Dynasty	11	3.1
Charlie's Angels	10	2.8
Different Strokes	10	2.8
Magnum, P.I.	10	2.8
Three's Company	10	2.8
Uncensored movies	10	2.8
Sports	9	2.5
Happy Days	8	2.2
The Jeffersons	8	2.2

SECOND FAVORITE SHOW (in descending order)

Dukes of Hazzard	19	5.9
Dallas	18	5.6
Movies	13	4.1
Walt Disney	12	3.7
Dynasty	12	3.7
Happy Days	12	3.7
Cartoons	11	3.4
Three's Company	10	3.1
Love Boat	10	3.1
Magnum, P.I.	10	3.1
Uncensored movies	9	2.8
The Voyagers	9	2.8
Fall Guy	9	2.8
The Jeffersons	8	2.5
T.J. Hooker	8	2.5

THIRD FAVORITE SHOW (in descending order)

Show	Frequency	%
Movies	17	6.4
Dukes of Hazzard	17	6.4
Cartoons	12	4.5
Sports	11	4.1
The Voyagers	10	3.8
Dallas	10	3.8
Love Boat	9	3.4
Magnum, P.I.	9	3.4
Walt Disney	9	3.4
Different Strokes	7	2.6
Dynasty	7	2.6
Happy Days	7	2.6
Matthew Star	7	2.6
Three's Company	7	2.6

FOURTH FAVORITE SHOW (in descending order)

Three's Company	3	6.7
Walt Disney	3	6.7
News	3	6.7
Sports	2	4.4
Movies	2	4.4
Tales of Gold Monkey	2	4.4
Magnum, P.I.	2	4.4
Knight Rider	2	4.4
The Jeffersons	2	4.4
Dallas	2	4.4
Bring Back Alive	2	4.4
ABC After School Spec.	1	2.2

WHICH ARE THE WORST TV SHOWS?

FIRST CHOICE (in descending order)

Show	Frequency	%
News	72	21.0
Uncensored movies	43	12.5
M.A.S.H.	26	7.6
Aviation Weather	22	6.4
Scary Shows	19	5.5
Movies	17	5.0
Sports	14	4.1
60 Minutes	9	2.6
Dallas	9	2.6
Dynasty	8	2.3
Soap Operas	8	2.3
Kung Fu	5	1.5
Dukes of Hazzard	5	1.3
Alaska's People	5	1.5
Believe it or not	4	1.2
NOVA	4	1.2
Pop Goes Country	4	1.2

SECOND CHOICE (in descending order)

News	27	13.6
Aviation Weather	15	7.5
M.A.S.H.	14	7.0
60 Minutes	11	5.5
Movies	7	3.5
Sports	7	3.5
NOVA	5	2.5
Soap Operas	5	2.5
Hill Street Blues	5	2.5
20/20	4	2.0
Tattle Tales	4	2.0
Pop Goes Country	4	2.0
Kung Fu	4	2.0
Uncensored movies	4	2.0
Facts of Life	4	2.0
Dynasty	4	2.0
Dallas	4	2.0

WHICH ARE THE WORST TV SHOWS? (continued)

THIRD CHOICE (in descending order)

Show	Frequency	%
News	10	11.5
Sports	7	8.0
Aviation Weather	6	6.9
M.A.S.H.	5	5.7
Alaska's People	4	4.6
NOVA	4	4.6
Pop Goes Country	4	4.6
60 Minutes	3	3.4
Dynasty	3	3.4
Bob Newhart	3	3.4
Captain Kangaroo	2	2.3
Kung Fu	2	2.3
Laverne & Shirley	2	2.3
Love Boat	2	2.3
Quest	2	2.3
20/20	2	2.3
Movies	2	2.3
Musicals	2	2.3

REASONS FOR NOT LIKING TV SHOWS

Reason	First		Second		Third	
	Freq.	%	Freq.	%	Freq.	%
Boring	161	50.9	48	42.1	35	62.5
Scary	31	9.8	11	9.6	1	4.2
Violent	13	4.1	3	2.6	0	-
Bad acting	2	.6	4	3.5	0	-
Fake	32	10.1	16	14.0	0	-
X-rated	16	5.1	5	4.4	2	8.3
Nonsense	6	1.9	2	1.8	0	-
Old times	6	1.9	3	2.6	1	4.2
Other	49	15.5	22	19.3	5	20.8
No reason	51	-	253	-	343	-
Total	367	100.0	367	100.0	367	100.0

WHERE TO LIVE QUESIONS BY AREA

1. DO YOU PLAN TO MOVE IN THE NEAR FUTURE?

Response	Northwest Freq.	%	Southeast Freq.	%
No	71	95.9	49	94.2
Yes	3	4.1	3	5.8

2. IF SO, WHERE WILL YOU MOVE?

Alaska city	1	100	1	50.0
Other	0	--	1	50.0

3. DO YOU WANT YOUR CHILDREN TO LIVE IN THE SAME VILLAGE?

No	12	16.7	14	26.9
Yes	52	72.2	25	48.1
Up to them	5	6.9	13	25.0
Don't know	3	4.2	0	--

4. DO YOU THINK YOUR CHILDREN WILL STAY AND LIVE IN VILLAGE?

No	20	29.4	22	43.1
Yes	36	52.9	18	35.3
Up to them	4	5.9	7	13.7
Don't know	7	10.3	4	7.8
Other	1	1.5	0	--

LANGUAGE QUESTIONS BY AREA

Response	Northwest Freq.	Northwest %	Southeast Freq.	Southeast %
DO YOU PERSONALLY USE ANY LANGUAGE OTHER THAN ENGLISH?				
No	5	6.7	33	64.7
Yes	70	93.3	18	35.3
IF YES, WHICH LANGUAGE?				
Local	41	59.4	12	70.6
Other	28	40.6	5	29.4
WHICH LANGUAGE WAS LEARNED FIRST AS A CHILD?				
English	27	39.7	24	75.0
Other	41	60.3	7	21.9
Same time for both	0	-	1	3.1
WHICH LANGUAGE DO YOU SPEAK AT HOME WITH ADULTS?				
English	20	27.0	46	97.9
Other	27	36.5	1	2.1
Both	27	36.5	0	-
WHICH LANGUAGE DO YOU SPEAK AT HOME WITH CHILDREN?				
English	36	50.0	42	97.7
Other	5	6.9	1	2.3
Both	31	43.1	0	-
DO YOUR CHILDREN UNDERSTAND NATIVE LANGUAGE?				
No	15	20.5	38	77.6
Yes	58	79.5	11	22.4
DO YOUR CHILDREN SPEAK NATIVE LANGUAGE?				
No	20	27.0	46	92.0
Yes	54	73.0	4	8.0
IS IT IMPORTANT FOR CHILDREN TO UNDERSTAND NATIVE LANGUAGE?				
Very important	70	93.3	27	55.1
Maybe important	5	6.7	12	24.5
Not important	0	-	10	20.4

WHO DECIDES WHAT CHILDREN WATCH?

	Northwest		Southeast	
	Freq.	%	Freq.	%
Children	54	72.0	10	19.6
Parents	24	28.0	41	80.4

BY EDUCATION LEVEL

	Northwest						Southeast					
	Low		Medium		High		Low		Medium		High	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Children	37	82.2	9	69.2	7	50.0	0	-	3	23.1	7	20.0
Parents	8	17.8	4	30.8	7	50.0	3	100.0	10	76.9	28	80.0

DO YOU EVER MAKE CHILDREN TURN TV OFF?

	Northwest		Southeast	
	Freq.	%	Freq.	%
No	19	25.0	7	13.7
Yes	57	75.0	44	86.3

WHY DO YOU MAKE CHILDREN TURN TV OFF?

Not appropriate	9	17.3	27	58.7
Do other thing	21	40.4	8	17.4
To watch show	7	13.5	6	13.0
Punishment	1	1.9	0	-
Don't like show	5	9.6	0	-
Education	0	-	1	2.2
Too noisy	4	7.7	0	-
Other	5	9.6	4	8.7

DO YOU WATCH TV WITH YOUR CHILDREN? BY AREA

Always	20	27.0	10	19.6
Sometimes	50	67.6	37	72.5
Never	4	5.4	4	7.8

DO YOU TALK WITH YOUR CHILDREN ABOUT TV?

Always	11	14.5	6	11.5
Sometimes	53	69.7	39	75.0
Never	12	15.8	7	13.5

ACQUISITION QUESTIONS. BY AREA

	Adult				Child			
	Northwest		Southeast		Northwest		Southeast	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
DO CHILDREN SEE THINGS ON TV THAT THEY WANT?								
No	10	13.9	7	13.7	25	11.3	22	16.5
Yes	62	86.1	44	86.3	197	88.7	111	83.5
DO THEY ASK ADULT TO BUY THEM?								
No	14	21.2	12	25.0				
Yes	52	78.8	36	75.0				
WHAT DO YOU DO WHEN THEY ASK/WHAT DO PARENTS SAY?								
Too expensive	10	18.2	6	14.3	16	12.8	3	5.1
Get for reason	3	5.5	1	2.4	5	4.0	7	11.9
Plan to get	11	20.0	11	26.2	24	19.2	18	30.5
Get it	9	16.4	5	11.9	14	11.2	9	15.3
Say no	17	30.9	11	26.2	52	41.6	16	27.1
Other	5	9.1	8	19.0	14	11.2	6	10.2

HAVE YOU SEEN THINGS YOU WANT ON TV? BY AREA

	Northwest		Southeast	
	Freq.	%	Freq.	%
No	30	40.0	21	42.9
Yes	45	60.0	28	57.1
THINGS YOU WANT				
Travel	0	-	4	13.8
Air mattress	0	-	1	3.4
Appliances	0	-	1	3.4
Books	1	2.2	0	-
Camping gear	1	2.2	0	-
Car	6	13.3	2	6.9
Clothes	2	4.4	0	-
Food items	5	11.1	0	-
Furniture	16	35.6	0	-
Games, toys	1	2.2	0	-
House, garage, appartment	1	2.2	2	6.9
Jewelry, watch, gold	0	-	1	3.4
Money	1	2.2	1	3.4
Movies	0	-	1	3.4
Records, tapes, video	0	-	4	13.8
Things, Lots of	1	2.2	2	6.9
TV show named	0	-	1	3.4
Church	0	-	1	3.4
Eskimo things	1	2.2	0	-
Household/kitchen	0	-	7	24.1
Running water	4	8.9	0	-
Other	5	11.1	1	3.4

CHANGE TV QUESTIONS. BY AREA

	Northwest Freq.	Northwest %	Southeast Freq.	Southeast %
IS THERE ANYTHING YOU WOULD LIKE TO SEE CHANGED ON TV?				
No	20	29.0	18	36.7
Yes	49	71.0	31	63.3
WHO WOULD YOU ASK TO CHANGE TV?				
TV committee	28	41.8	10	21.3
Anchorage	5	7.5	1	2.1
TV station	1	1.5	2	4.3
Government	2	3.0	2	4.3
Those in charge	2	3.0	0	-
Don't know	26	38.8	22	46.8
Other	1	1.5	10	21.3
No answer	2	3.0	0	-
DO YOU THINK IT WOULD DO ANY GOOD TO ASK?				
No	10	15.6	17	36.2
Yes	54	84.4	30	63.8
WHO CHOOSES THE PROGRAMS THAT ARE BROADCAST?				
TV committee	10	24.4	9	24.3
TV station	2	4.9	4	10.8
Government	1	2.4	0	-
Those in charge	2	4.9	2	5.4
Don't know	24	58.5	21	56.8
Other	2	4.9	1	2.7

PROBLEMS WITH TV QUESTIONS. BY AREA

NUMBER OF COMMERCIALS ON TV				
Yes, problem	34	45.3	31	60.8
No problem	31	41.3	16	31.4
? or no opinion	10	13.3	4	7.8
AMOUNT OF VIOLENCE ON TV				
Yes, problem	34	45.3	36	69.2
No problem	29	38.7	11	21.2
? or no opinion	12	16.0	5	9.6

PROBLEMS WITH TV QUESTIONS. (continued)

	Northwest		Southeast	
	Freq.	%	Freq.	%
AMOUNT OF SEX OR BAD LANGUAGE ON TV				
Yes, problem	39	52.0	41	78.8
No problem	17	22.7	9	17.3
? or no opinion	19	25.3	2	3.8
THE QUALITY OF CHILDREN'S PROGRAMMING				
Yes, problem	14	18.7	18	38.3
No problem	52	69.3	24	51.1
? or no opinion	9	12.0	5	10.6
THE SHORTAGE OF ALASKAN PROGRAMMING				
Yes, problem	36	48.6	29	58.0
No problem	30	40.5	12	24.0
? or no opinion	8	10.8	9	18.0

IS TV FOR YOU QUESTIONS. BY AREA

ENJOYABLE OR DISAPPOINTING?				
Enjoyable	65	95.6	42	87.5
Disappointing	3	4.4	6	12.5
INTERESTING OR UNINTERESTING?				
Interesting	67	95.7	44	91.7
Uninteresting	3	4.3	4	8.3
EXCITING OR DULL?				
Exciting	52	83.9	29	72.5
Dull	10	16.1	11	27.5
BAD OR GOOD?				
Bad	5	7.6	13	31.7
Good	61	92.4	28	68.3
A POWERFULL OR WEAK INFLUENCE?				
Powerfull	44	65.7	26	61.9
Weak	23	34.3	16	38.1

DO YOU THINK THE NEWS PROGRAMS REPORT THINGS THE WAY THEY ACTUALLY HAPPEN? BY AREA

	Northwest		Southeast	
	Freq.	%	Freq.	%
No	3	4.3	7	15.2
Yes	63	90.0	38	82.6
Sometimes	1	1.4	0	-
No comment	1	1.4	0	-
Don't know	2	2.9	1	2.2

MAGAZINE, BOOK, NEWSPAPER QUESTIONS. BY AREA

	Northwest		Southeast	
	Freq.	%	Freq.	%
DO YOU READ MAGAZINES?				
No	41	55.4	10	19.2
Yes	33	44.6	42	80.8
TYPE OF MAGAZINE				
National news	9	27.3	19	45.2
National specialty	15	45.5	17	40.5
National general	3	9.1	5	11.9
Alaska magazine	4	12.1	0	-
Other	2	6.1	1	2.4
FREQUENCY OF BOOK READING				
Daily	24	39.3	16	31.4
Weekly	15	24.6	13	25.5
Monthly	9	14.8	11	21.6
Never	13	21.3	11	21.6
WAS BOOK NAMED?				
Named book	23	57.5	33	94.3
Named paper	16	40.0	0	-
Named comic	1	2.5	0	-
Didn't know	0	-	2	5.7
DO YOU READ NEWSPAPERS?				
No	15	24.3	1	1.9
Yes	49	76.6	51	98.1
HOW OFTEN DO YOU READ PAPER?				
Daily	4	9.3	32	64.0
Weekly	28	65.1	15	30.0
Monthly	11	25.6	3	6.0
WHICH NEWSPAPERS?				
Alaska paper	8	17.4	46	95.8
Regional	3	6.5	0	-
Native	33	71.7	0	-
Local	1	2.2	1	2.1
National	1	2.2	0	-
Unspecified	0	-	1	2.1

MAGAZINE, BOOK, NEWSPAPER QUESTIONS. (continued)

	Northwest		Southeast	
	Freq.	%	Freq.	%
DO YOU GO TO THE MOVIES?				
No	62	98.4	33	64.7
Yes	1	1.6	18	35.3
HOW OFTEN DO YOU ATTEND MOVIES?				
Monthly	1	100.0	1	5.3
2-3 months	0	-	18	94.7

Appendix D

The Roles of Inupiat and Tlingit and Haida Women

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September, 1983

The Roles of Inupiat and Tlingit and Haida Women

Introduction

The following descriptive account of the roles of Inupiat women and Tlingit-Haida women is based on several sources.

My continuous and intermittent field research and projects among the Inupiat during the past eight years have contributed to my general observation of the Inupiat women, particularly in the economic and political area and to a lesser extent in the social and cultural domain. My involvement in the formation of the Alaska Native Women's Statewide Organization and Alaska Native Education Association have also contributed to my generalizations of Inupiat and Tlingit women. In addition, I am familiar with the major anthropological literature on these societies. I also have participated [in] and authored several of the more recent reports, including the Institute of Social and Economic Research's (ISER's) Man in the Arctic project, the Outer Continental Shelf Socioeconomic Studies Program reports, and various state and federal subsistence reports.

My experience among the Tlingit and Haida includes my own membership in the society. In addition, I have conducted two research projects and a number of workshops in various Southeast communities. None of these studies focused solely on the roles of Inupiat or Tlingit women in their societies. However, my overall research and experience provide an adequate background to provide a generalized description.

My most recent research was on the economic status of Alaska Natives. In that project, I visited several communities throughout the state. I interviewed Inupiat and Tlingit and Haida women in their villages as well as other communities outside of their traditional regions. I have drawn most extensively from this work.

Inupiat Women

While Inupiat women have been in contact with Western society for 150 years, assimilative forces have been intermittent. Further stimuli which promote sociocultural change have not occurred at a steady rate, but rather have accelerated and declined throughout the historical period. During the last decade, villages have undergone dramatic change, and indications are that present forces of sociocultural change are extensive. Perhaps one of the most dramatic historical changes which has had the greatest impact on the daily lives of Inupiat women is education. The impact was the greatest during the 1940-1970 boarding school era, when Native students were sent outside of their region to attend school. Northern communities are still experiencing the effects of the boarding school.

Joe Bloom was one of the first researchers to note the "out-migration" of Native women from their villages. The lack of wage employment opportunities in all likelihood contributed to their decision not to remain or return to their villages. A number of factors also may have promoted the out-migration. The tedious and arduous role of Native women in subsistence production probably was not attractive to many. The importance of Native women in subsistence

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also was diminishing. Women were no longer required to manufacture such items as clothing which had been replaced by mail-order clothing. In addition, the lack of modern housing, facilities, and social activities may have affected their decision to leave.

The effects of the out-migration of Inupiat women from their villages are still apparent in the age/sex composition of village populations. Generally males outnumber females. A recent investigation of an Inupiat village indicated the male population at 55 percent and the female population at 45 percent. The greater differential existed in the age 25 to 44 age group, which is the age group most likely to have attended boarding school. The sex ratio of the population over 45 is about equal. The sex differential is also apparent in the 16 to 29 age group. Generally, village populations have more young, single, adult males than females. One northern village I visited had three young, single, females and over twelve males in the same age range. The competition among the males for the young, single females would seem to be high.

An assumption that could be made is that the construction of local high schools and increased wage opportunities in the villages may serve to reverse this trend. However, other statistics reflect that Native females are attending postsecondary education at a three-to-one ratio. That increasing educational levels appear to affect migration patterns among Natives suggests that the out-migration of Native women will continue.

The role of Inupiat women varies by age group. These differences are in part a factor of change but are probably more related to historical changes and ongoing stimuli of change which differentially affect the different age groups. At a generalized level the assumption can be made that age correlates to degree of assimilation into Western society with the older female being less assimilated than the younger female. However, the Inupiat Spirit Movement, which is a revitalization effort of Native culture, may well reverse this trend.

The larger female adult population in Inupiat villages is comprised of married women with children followed by single women with children. Generally most of these women have graduated from high school or have their GED. A significant percentage have had some college training in addition to various types of on-the-job training or health or teacher aide training.

Inupiat is the first language of the adult female population. Studies in the North Slope indicate that the female participation in wage employment increases English language use. While Inupiat in the Upper Kobuk region is more viable than in other areas, according to Michael Krauss, the use of English among the young appears to be dominant. However, the Inupiat Spirit Movement has placed priority emphasis on the use of Inupiat.

As noted earlier, the role of Inupiat women in the subsistence economy has undergone dramatic change, particularly in the production sector. Western clothing has largely replaced Inupiat clothing, with the exception of parkas and, to a lesser extent, kammiks (popularly known as mukluks). This change has made much more time available for the Inupiat female. Her chores in the preparation and preservation of subsistence foods remains important. She is also active in subsistence production related to fishing and gathering roots, berries, etc. In addition, her role in the distribution of

subsistence resources throughout the extended family remains important. While subsistence production may be a full-time occupation during the peak subsistence season, it is not a full-time, year-round occupation.

Kleinfeld et al. report that the Inupiat female participation in the wage economy is similar to national statistics for women. While the percent of participation may not be the same for Inupiat women outside of the North Slope region, the general assumption may prevail.

Subsistence labor is divided between males and females. This division of labor also extends to the wage economy. The division of labor between the sexes remains a strong cultural value among the Inupiat. Household chores are the responsibility of the Inupiat females. These responsibilities have extended into the wage economy. Teacher and health aide positions are the domains of women as well as other support service types of jobs, such as store clerks and office clerks.

Employment opportunities are limited in rural communities and full-time, year-round jobs are even more rare. Women compete for the few job openings. The types of jobs Inupiat women obtain are generally in administrative support areas. Another characteristic is the rotation of jobs among women or, viewed from another perspective, the mobility of Native women in wage jobs.

Generally females are viewed by employers as being more dependable than Inupiat males. This may be in part related to the Inupiat male's responsibilities and participation in the subsistence economy. Recent phenomena in wage economy are the entrance of Inupiat women into construction jobs, and the recognition of sexual discrimination. While division of labor is accepted in the subsistence (I have never heard an Inupiat female demanding to be an UMEALIK, i.e., captain or leader), Inupiat females are demanding equal access to the non-traditional female jobs.

Elected political positions are generally not held by Inupiat females. Boards and councils tend to be dominated by males. Political positions do not appear to be a priority objective among Inupiat females. However, Inupiat females are influential on health boards and in other social service domains.

Social interaction among Inupiat females in smaller villages is high. Communities are comprised of local families with large extended families dispersed among several households. Visiting among women begins as early as 9:00 a.m. with a cup of coffee, and continues throughout the day until well after midnight. During one of my research projects ten individuals visited one home within a two-hour period. Women will watch over and care for their kin or neighbor's children. Mothers will feed other children if they are in the home at the time she is feeding her own.

Church activities also take much of a woman's time. In addition to church services she will attend singspirations and potluck dinners. Mothers' Clubs are also important in many Inupiat villages. The social isolate is rare in these villages. Women are tied by kinship and friendship to others within a community.

Tlingit and Haida Women

Contemporary literature on the Tlingit and Haida is quite limited. These societies have not had the benefit of social scientific investigations, such as those initiated under the OCS-SESP and state and federal subsistence studies among the Inupiat.

Tlingit and Haida are two separate groups. Culturally they are similar and historical forces have, for the most part, levelled any major cultural differences.

Tlingit and Haida women have had contact with Westerners for a hundred years longer than their Inupiat counterparts. Women in the villages have been more isolated than women living in the larger Southeast communities.

Tlingit and Haida women were also sent to boarding schools. However, this differed from the Inupiat experience in that the boarding schools were located in their traditional homeland. Although the separation from family and community may have been traumatic, it did not include the culture shock experienced by the Inupiat who had to leave their Arctic homeland.

The Tlingit and Haida placed a strong emphasis on education and on assimilating western elements into their society. The use of English was prized and the use of Tlingit and Haida discouraged. As a result, the greater number of Tlingit and Haida women now speak English. Individuals under the age of forty who speak their Native language are a rarity. For all intents and purposes, the Tlingit and Haida languages are moribund and are expected to be extinct by the year 2030. A large number of Tlingit and Haida women have learned traditional songs within the last several years, but most have no knowledge of their interpretation or meaning.

A major characteristic of Tlingit and Haida women is the rule of matrilineal descent. A child's membership in a clan is determined by his/her mother's clan. Although most children and young adults today may not know the names of their mother's clan or understand the clan structure, they generally know that descent is traced through the mother. This knowledge may serve to add to the status of women. It also may give a psychological boost to Tlingit and Haida women.

The societies continue to place a cultural value on women. The Tlingit and Haida Indians have reversed their earlier position of assimilation and eradication of traditional practices. The Tlingit and Haida are currently focusing considerable attention on cultural preservation, maintenance and restoration.

Subsistence activities remain significant. The subsistence economy is particularly important in the villages and the cultural and social meanings are important throughout Southeast. The women's role in subsistence production is essential in the preservation of foods. Preparing and drying or smoking fish, gathering and drying seaweed, making hooligan or seal oil, and preserving salmon eggs are generally skills held by older women. Recently younger women have begun to make additional efforts to learn these skills. Women who can prepare and preserve these highly prized foods are admired since subsistence foods have the added dimension of reaffirming cultural identity. The women who share Native food with friends and family and contribute food for potluck dinners are ceremonial potlatches are highly esteemed.

Tlingit and Haida women had an easier transition than the Inupiat into the wage economy. In essence, the traditional economy which centered around salmon was modernized. Tlingit and Haida women went to work in salmon canneries while the men continued to harvest the fish. Until the late 1960's, most all Tlingit and Haida women grew up working in the salmon canneries. Most frequently the women moved to the salmon cannery sites during the summer months. During the off-periods, they continued to preserve their Native foods. With the decline in salmon stocks, the introduction of cold storage plants, and the movement of non-Native women into the salmon canneries, Tlingit and Haida women began to enter other employment sectors in great numbers.

In the late 1960's and the 1970's, Tlingit and Haida women began to enter clerical jobs. This was in part due to tribal organizations and councils contracting with federal and state agencies to administer health, education, and social service programs. At the same time, a greater number of Tlingit and Haida women began to enter college and graduate schools. A significant factor which may have contributed to their success was that a larger number of these women entering college were older women rather than recent high school graduates. The former made great strides in their educational and professional development. I had the occasion of holding a women-in-management seminar in which twenty-three Tlingit and Haida women participated. They were entering or had entered the professional ranks in such areas as business, fisheries, education and the social sciences.

While Tlingit and Haida women have made significant economic advances, sexual discrimination is also evident and often discussed among the female population. The Southeast women were, in fact, the organizers of the first statewide Native women's meeting and organization. One of the primary objectives of the organization is to promote economic and political sexual equality. While Tlingit and Haida women appear to be more educated as a whole than their male counterparts, this is not evident in the economic and political structures among the Tlingit and Haida.

I have noted elsewhere that the Tlingit and Haida seem to have a "cultural propensity" to organize. This may be attributed to their traditional social organization which was highly formalized. Their socialization and cultural values also promoted a commitment "to work for their people." This value is evident in the types of employment Native women enter, such as health and education. It may also explain their involvement in such organizations as the Alaska Native Sisterhood, the Tlingit and Haida councils, and a host of other organizations and committees.

The Tlingit and Haida also have a cultural norm which stresses protocol. This emerges in their demand to adhere to parliamentary procedures in organizational meetings. I once had a call from a village corporation which was looking for a parliamentarian for their annual meeting. He said that I was the third Tlingit woman to whom he had been referred. Command of the Robert's Rules of Order has been an asset for Tlingit and Haida women. They often have been able to use their training to gain influence in non-Tlingit and Haida organizations.

Overall, Tlingit and Haida women appear to have assimilated many Western traditions. However, they have simultaneously developed a strong consciousness about their ethnic and cultural identities. Their most prominent cultural attributes include their participation in a variety of social, civil and political organizations and activities, their insistence on adherence to protocol, their stated commitment to their people, and a high value on education.

Television

The following comments are limited to my general observations of the Inupiat. Television is a pervasive force in the everyday lives of the Inupiat. Its presence ranges from a subtle background noise to commanding the full attention of everyone in the room. It is turned on throughout the entire broadcast day. However, it is not always watched. Individuals and families have favorite programs they watch.

In one community I knew women who would run home during their lunch hours to watch soap operas which they faithfully followed. I also marvelled at young men who probably had never seen or played football or baseball, yet liked to watch these games on TV. I also noted that some TV stars were more popular than others. Inupiat males in one community were rated by Inupiat females as being "so-Kojak!" or "so un-Kojak!"

I also noted the active participation of the Inupiat TV audience in TV programs. Inupiat viewers often shouted at the actors to "watch out!" or "stop!" or "hurry!" I also couldn't help but note the stark contrast between the lives of the Inupiat and the TV world. I often wondered how some of the things occurring on TV were comprehended or interpreted by the Inupiat. One Inupiat female once asked me, "Why do white people tell each other that they are dirty?" I asked her to explain. She said, "You know, they are always telling each other their shirts are dirty--ring around the collar, or they need to take a bath--use deodorants or brush their teeth." Another young girl asked me if white people hear music all the time. She was referring to background music during commercials or in the movies.

I once asked a young girl about a show which portrayed a homosexual couple. I wanted to learn how she interpreted the relationship. I asked her, "Who is Johnny?" She replied, "Oh, Johnny is Robert's boyfriend." The presence of TV is apparent as is the fact that values of the outside society, many of which are alien to Inupiat societies, are becoming ingrained into the Inupiat society.

The following is a descriptive account from one of my reports based on my participant-observation in Kaktovik in 1982:

Television has become a prominent part of visiting interactions since it was introduced into Kaktovik three years ago. At first appearance it seems to dominate social behavior. An assumption which is commonly made is that social interaction decreases with the introduction of television. However, indications are that it serves as a focal point of a high level of social interaction. Members of the family gather around the television for several hours an evening, and visitors remain until the station signs off in the early hours of the morning. Individuals do not necessarily focus their entire attention on the television but participate in continual conversation about the programs or other events. Adults play with young children

as they watch. The following day, television often serves as a topic of conversation. While television is bringing the outside world into the Kaktovik homes, it does not appear to be decreasing social interaction.

Appendix E

Sample Entertainment Television Schedules

State Channel, 1977, 1979, and 1983

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Television Schedule: 1979

MONDAY

5:30- 6:00	Capital 79, off-air	KAKM
6:00- 6:30	Ch. 13 Local News, off-air	KIMO
6:30- 7:00	Aviation Weather, off-air	KAKM
7:00- 8:00	Little House on the Prairie	KENI
8:00- 9:00	Charlie's Angels	KIMO
9:00- 9:30	Taxi	KIMO
9:30-10:00	ABC National News, taped at Tape Center	KIMO
10:00-12:00	Movie:	

TUESDAY

5:30- 6:00	Capital 79, off-air	KAKM
6:00- 6:30	Ch. 13 Local News, off-air	KIMO
6:30- 7:00	Aviation Weather, off-air	KAKM
7:00- 8:00	Battlestar Galactica	KIMO
8:00- 9:00	Starsky & Hutch	KIMO
9:00- 9:30	WKRP	
9:30-10:00	ABC National News, taped at Tape Center	KIMO
10:00-12:00	Movie:	

WEDNESDAY

5:30- 6:00	Capital 79, off-air	KAKM
6:00- 6:30	Ch. 13 Local News, off-air	KIMO
6:30- 7:00	Aviation Weather, off-air	KAKM
7:00- 8:00	Wonder Woman	KIMO
8:00- 9:00	Vega$	KIMO
9:00- 9:30	Barney Miller	KIMO
9:30-10:00	ABC National News, taped at Tape Center	KIMO
10:00-12:00	Movie:	

THURSDAY

5:30- 6:00	Capital 79, off-air	KAKM
6:00- 6:30	Ch. 13 Local News, off-air	KIMO
6:30- 7:00	Aviation Weather, off-air	KAKM
7:00- 8:00	Incredible Hulk	KTVA
8:00- 8:30	Delta House	KTVA
8:30- 9:30	Kaz	
9:30-10:00	ABC National News, taped at Tape Center	KIMO
10:00-12:00	How The West Was Won	KIMO

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Television Schedule: 1979 (cont.)

FRIDAY		
5:30- 6:00	Capital 79, off-air	KAKN
6:00- 6:30	Ch. 13 Local News, off-air	KIMO
6:30- 7:00	Aviation Weather, off-air	KAKN
7:00- 7:30	Happy Days	KIMO
7:30- 8:30	Hee Haw	KTVA
8:30- 9:30	Rockford Files	KENI
9:30-10:00	ABC National News, taped at Tape Center	KIMO
10:00-10:30	Wrangler	KTVA
10:30-12:30	Movie:	
12:30- 2:00	Midnight Special	KENI

SATURDAY		
4:30- 6:00	Wide World of Sports	KIMO
6:00- 6:30	NBC National News, off-air	KENI
6:30- 7:00	Muppets	KIMO
7:00- 7:30	Mork & Mindy	KIMO
7:30- 8:00	Alaska Review (alternate with)	
8:00- 9:00	8 is Enough	KIMO
9:00-10:00	The Prisoner	KAKN
10:00-12:00	Movie:	
12:00- 1:30	Saturday Night Live	KENI

SUNDAY		
5:00- 6:00	60 Minutes, live	
6:00- 7:00	Disney	KENI
7:00- 8:00	Star Trek	KTVA
8:00- 9:00	Salvage	KIMO
9:00-11:00	Movie:	
11:00-11:30	3's Company	KIMO
11:30-12:30	Hawaii 5-0	KTVA

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Evening Entertainment Television Schedule: March, 1983

Monday 3/21

7:00	Chips
8:00	20/20
9:00	Trapper John
10:00	Mirage
11:00	LATE MOVIE: Duel at Diablo

Tuesday 3/22

7:00	Facts of Life
7:30	Cheers
8:00	High Performance
9:00	MOVIE: Shogun
12:00	Matt Houston

Wednesday 3/23

7:00	Diffrent Strokes
7:30	Charlie Brown Special
8:00	Greatest American Hero
9:00	MOVIE: Shogun
11:00	T. J. Hooker
12:00	Cagney & Lacey

Thursday 3/24

7:00	Fame
8:00	Alaskan Profiles
8:30	Taxi
9:00	MOVIE: Shogun
11:00	Simon & Simon
[illegible]	Mission Impossible

Friday 3/25

7:00	Little House
8:00	Condo
8:30	Amanda's
9:00	Real People
10:00	MOVIE: Shogun
12:00	LATE MOVIE: Destination Tokyo

Saturday 3/26

4:30	Weekend Special
5:00	NOVA
6:00	National & Weekend News
7:00	Matthew Star
8:00	Knight Rider
9:00	MOVIE: Shogun
12:00	SCTV

Sunday 3/27

7:00	Disney
8:00	Gloria
8:30	Alaska's People
9:00	MOVIE: Will There Ever Be a Morning
12:00	Fall Guy

Monday 3/28

7:00	Chips
8:00	20/20
9:00	Trapper John
10:00	Hill St. Blues
11:00	LATE MOVIE: Harry In Your Pocket

Tuesday 3/29

7:00	Women of the Alaska Territory
7:30	Cheers
8:00	High Performance
9:00	The A Team
10:00	MOVIE: Dixie: Changing Habits
12:00	Matt Houston

Wednesday 3/30

7:00	Bugs Bunny's Easter
7:30	Fat Albert's Easter
8:00	Greatest American Hero
9:00	T. J. Hooker
10:00	MOVIE: The Hunter
12:00	Cagney & Lacey

Thursday 3/31

7:00	Fame
8:00	Alaskan Profiles
8:30	Taxi
9:00	The Renegades
10:00	MOVIE: The Inlaws
12:00	Mission Impossible (*)

Friday 4/1

7:00	The Smurf's Easter Special
7:30	Family Circus Easter
8:00	MOVIE: Starflight
11:00	LATE MOVIE: Columbo
1:30	Austin City Limits

Saturday 4/2

4:30	Weekend Special
5:00	NOVA - City of Coral
6:00	National & Weekend News
7:00	Matthew Star
8:00	Knight Rider
9:00	St. Elsewhere
10:00	MOVIE: The Marx Brothers - In a Nut Shell
12:00	SCTV

Sunday 4/3

7:00	Wizzards & Warriors
8:00	Gloria
8:30	Alaska's People
9:00	Family Tree
10:00	MOVIE: Baby Sister
12:00	Fall Guy

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Television Schedule: Satellite Television Demonstration Project*

This composite schedule is typical for a week in March, 1977.

Monday

Educational 8:00A to 12:30P
University of Alaska
Sesame Street
Right On! - Health Ed/Elem.
Wordshop - Language Arts/3rd Gr.
Self, Inc. - Health Ed/Jr. High
Basic Skills (GED Preparation)

Evening 5:00P to 12:00M
Nightly News (live) NBC
Capital 77 APBC
Six Million Dollar Man ABC
NCAA Basketball NBC
Monday Night Movies NBC
Capital 77 APBC
News CBS

Tuesday

Educational 11:00A to 2:25P
Introduction to Business Admin.
(100 level college course)
Introduction to Psychology
(100 level college course)
Health Films - General
Instructional Program

Evening 5:00P to 12:00M
Nightly News (live) NBC
Capital 77 APBC
NOVA PBS
Happy Days ABC
M.A.S.H. CBS
Baa-Baa Black Sheep NBC
Sports Spectacular CBS
All in the Family CBS
Capital 77 APBC
News CBS

Wednesday

Educational 10:00A to 4:55P
Right On! - Health Ed./Elem.
Self, Inc. - Health Ed./Jr. High
Wordshop - Language Arts/3rd Gr.
Electric Company
Infinity Factory
Basic Skills (GED Preparation)
Satellite TV Demonstration
(information concerning the project)

Evening 5:00P to 12:00M
Nightly News (live) NBC
Capital 77 APBC
Jacques Cousteau ABC
NBA Basketball CBS
Wednesday Night Movie CBS
Capital 77 APBC
News CBS

Thursday

Educational 8:00A to 1:15P
University of Alaska
Infinity Factory
Inside/Out - Health Ed./8-10
Introduction to Business Admin.
(100 level college course)
Introduction to Psychology
(100 level college course)
Health Films - General
Instructional Program

Evening 5:00P to 12:00M
Nightly News NBC
Capital 77 APBC
Wild Kingdom CBS
Once Upon A Classic PBS
Barney Miller ABC
Tales of the Unexpected NBC
The Waltons CBS
Sanford and Son NBC
Hawaii 5-0 CBS
Capital 77 APBC
News CBS

Friday

Educational 10:00A to 12:30P
Sesame Street
Right On! - Health Ed./Elem.
Inside Out - Health Ed./8-10
Instructional Program
Basic Skills (GED Preparation)

Evening 5:00P to 12:00M
Nightly News (live) NBC
Capital 77 APBC
Children's Film Festival CBS
Donny and Marie ABC
Charlie's Angels ABC
Bionic Woman ABC
Hee Haw CBS
Capital 77 APBC
News CBS

Saturday

Educational 7:00A to 9:00A
Introduction to Business Admin.
(repeat of Tuesday and Thursday)
Introduction to Psychology
(repeat of Tuesday and Thursday)

Evening 5:00P to 11:00P
American Bandstand ABC
Saturday News NBC
Legislative Weekly Summary APBC
Little House on the Prairie NBC
Fantastic Journey NBC
Saturday Night at the Movies NBC

Sunday

Educational - None

Evening 5:00P to 11:00P
60 Minutes (live) CBS
Bugs Bunny/Roadrunner Hour CBS
Big Blue Marble CBS
Wonderful World of Disney NBC
Code R CBS
Wide World of Sports ABC

* Information from State of Alaska's
Governor's Office of Telecommunications
Juneau, Alaska, 1978